The Veterinary Record

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S., 1888.

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NEW VETERINARY ACT FOR THE UNION OF SOUTH AFRICA

A new Veterinary Act has been passed by the Senate and House of Assembly of the Union of South Africa. The Act provides for the establishment of a Veterinary Board, which will include three representatives of the South African Veterinary Medical Association. A Register of Veterinarians is to be set up and a Registrar appointed. The qualifications for registration are set out in Sections 8 and 9, which read as follows:—

8. The Governor-General may from time to time, after considering any recommendation of the Veterinary Board to that effect, prescribe by regulation the degrees, diplomas, and certificates granted after examination by a university, veterinary medical school or other institution which, when held singly or conjointly with any other degree, diploma or certificate, shall entitle the holders thereof to registration under this Act as veterinarians: Provided that, no degree, diploma or certificate of a university, veterinary medical school or other institution outside the Union shall entitle the holder thereof to be so registered unless:—

(*a*) such degree, diploma or certificate entitle the holder to practise as veterinarian in the country in which such university, veterinary medical school or other institution is situate; and

(*b*) by the laws of that country a person holding a degree in veterinary science, granted after examination by any university in the Union, and entitling him to be registered under this Act, as a veterinarian, is qualified without further examination for admission to the practice of a veterinarian in that country or for admission to the State Veterinary Service in that country or in its colonies; and

(*c*) the Veterinary Board is satisfied that possession of such degree, diploma or certificate indicates a standard of veterinary knowledge not lower than that required for the acquisition of the degree in veterinary science at any university in the Union which entitles the holder thereof to be registered as a veterinarian under this Act.

9. (1) Any British subject who:—

(*a*) having been born in any part of the Union; or

(*b*) being domiciled in the Union when he commences his veterinary studies and having proceeded therefrom for the purpose of prosecuting those studies, has obtained a degree, diploma or certificate not prescribed under section *eight*, but which is prescribed under sub-section (2), may be registered as a veterinarian under this Act.

(2) The Governor-General may from time to time, after considering any recommendation of the Veterinary Board to that effect, prescribe by regulation the degrees, diplomas and certificates of a university, veterinary medical school or other institution outside the Union which when held singly or conjointly with any other degree, diploma or certificate by any person described in subsection (1) shall entitle the holder thereof to be registered as a veterinarian under this Act: Provided that:—

(*a*) such degrees, diplomas or certificates have been granted after examination; and

(*b*) such a degree, diploma or certificate would, so far as professional qualifications are concerned, entitle the holder to practise as a veterinarian in the country in which the university, veterinary medical school or other institution in question is situate; and

(*c*) the Veterinary Board is satisfied that such degrees, diplomas or certificates indicate a standard of veterinary knowledge not lower than that required for the acquisition of the degree in veterinary science at any university in the Union which entitles the holder thereof to be registered as a veterinarian under this Act.

The Registration Fee is £10, except in the case of persons already registered by virtue of certain Natal laws, and of officers in the public service.

Provision is made for the registration of persons who have practised veterinary science in the Union as the sole or principal means of livelihood for ten years, or, if the holder of a qualification not otherwise recognised, since December 31st, 1927.

Provision for the removal of names from the Register and restoration thereto is also made.

The Veterinary Board has power to enquire

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into complaints of unprofessional conduct, and to impose the following penalties:—

15. (1) (*a*) reprimand and caution under the hand of the chairman; or

(*b*) suspension for a specified period during which period such person shall be deemed not to be registered as a veterinarian under this Act; or

(*c*) erasure of his name from the Register referred to in section *seven*.

Power is given to the officers of the Board to summon witnesses and require the production of documents. The summons has the effect of a subpœna, for the penalty for refusal to obey is £25. Witnesses' fees and travelling expenses are, however, to be paid.

Sections 16 and 17 of the Act make the following provisions:—

16. No person shall be entitled to recover any charges in any court of law for any veterinary advice or attendance unless he is registered under this Act as a veterinarian or under the Medical, Dental, and Pharmacy Act, 1928, as a medical practitioner.

17. (1) Any person not registered under this Act as a veterinarian who pretends, or by any means whatsoever holds himself out to be a veterinarian (whether or not purporting to be so registered) or uses the name of veterinarian or veterinary surgeon or any name, title, description or symbol indicating or calculated to lead persons to infer that he possesses a degree, diploma or other qualification as a veterinarian or veterinary surgeon or in veterinary science or that he is registered as a veterinarian under this Act, shall be guilty of an offence and liable on conviction to a fine not exceeding fifty pounds.

(2) In any prosecution of any person under sub-section (1) the accused shall be presumed not to be registered as a veterinarian under this Act until he is proved to be so registered.

SPURIOUS DEGREES

Bill to Prohibit their Use.

A bill introduced in the House of Lords by Lord Jessel—the text of which was issued on May 5th,—seeks to penalise the unauthorised use and issue if university degrees.

It would become a penal offence for any person to use any letters after his or her name which are used by any university within the United Kingdom or Dominions or Colonies to denote the holding of a degree, unless such person actually holds the degree specified conferred by a recognised university as defined by the measure.

It would also be a penal offence for any company, institution, organisation, or individual, not being a recognised university, to confer degrees purporting to be university degrees for profit or otherwise. The maximum penalty for contravention of the Act would be £50.

SOME SURGICAL CONDITIONS OF THE DOG'S EYE MET WITH IN GENERAL PRACTICE*

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At the present time the subject of discussion in veterinary circles is often that of clinical specialisation and usually the "cons" outweigh the "pros" by a wide margin. The argument in favour is lost, due chiefly to the economic value of our patients. At the same time, veterinary clinicians very often choose some aspect of clinical medicine or surgery to which they pay added attention in an effort to collect certain scientific data, as a result of their observations and deductions. This acts as an incentive to delve into literature on the subject, both veterinary, which may be at a premium, and medical. By this means they more readily appreciate histological and pathological changes which might easily be overlooked in their anxiety for resolution. It matters not one iota how these facts or scientific details are discovered, for many of the important discoveries of yesterday were accidents. One may adopt some line of speculative treatment and meet with unqualified success. In an isolated instance little attention is paid to the result, but with the same result in successive cases the clinician gains confidence and endeavours to discover reasons for his good fortune.

To find an answer to the words "Why?" and "How?" is often very difficult, and the clinician merely contents himself with the progress made. However, in the clinical world an advance has been made and one never knows when the next rung of the ladder will be scaled.

The purport of these remarks is to ask critical audiences not to expect too much but to put their observations before others in an effort to secure further knowledge.

To me, the eye of the smaller animals has been of interest for the last three or four years, yet I cannot claim to have advanced very far; in fact, most of the knowledge I have at my disposal has been gleaned from veterinary and medical authors, and from veterinary surgeons with whom I have been in contact. I have merely tried to put such knowledge into practice and to watch results.

There is not an abundance of veterinary literature on the eye and probably the only book dealing solely with the eye is the translation, by Henry Gray, with additions, of Dr. Nicholas' work. To him we should be very grateful, for he has possibly studied the diseases of the eye more than any other British veterinarian.

* Paper presented to the Southern Counties Division, N.V.M.A., on the occasion of the Annual General Meeting of the Society, held at Southampton, on March 31st, 1933.

Perhaps it is the complex structure and difficulty in examination in veterinary patients which deter veterinary surgeons, but with the increase in small-animal practice this organ will no doubt receive the attention it deserves.

This afternoon I want to mention one or two of the diseases or problems which are met with, involving the more superficial structures of the eye.

Hypertrophy or Hyperplasia of the Harderian Gland.—In the first place, I propose to discuss a condition quite frequently met in bloodhounds, bulldogs and, on occasions, in other breeds: a condition which I call hypertrophy or hyperplasia of the Harderian gland. Gray describes it as luxated Harderian gland, and whilst, as regards position, I agree with him, it would be scarcely recognised on many occasions (especially in puppies) if it were not in a state of hyperplasia. It presents itself as an ovoid to a globular swelling behind the membrana nictitans, sometimes hidden completely by that membrane and at others protruding and visible. It is unsightly, injected a dirty red in colour, inconveniences the dog, and is best treated by surgical removal.

In the removal of this gland, I would emphasise the need for caution. If it is protruding beyond the edge of the third eyelid, then it will be found to be loosely attached by means of a fold of conjunctival membrane, giving the appearance of pedunculation. Here excision is easy without causing any malformation of the membranes. If, on the other hand, it is not loosely attached and not luxated to any marked degree, then the operation is more delicate. Often in such cases part of the membrane is excised or the cartilaginous edge is severed or lacerated. This is serious, in that the third eyelid crumples, giving rise to a disfigurement which jeopardises the animal's chances in the show ring and diminishes his selling value. I have seen cases in which the whole membrane has been removed, much to the annoyance of the owners and breeders who have brought these points to my notice.

Hence, instead of merely snipping off with scissors one should enlist the services of a sharp scalpel and remove no more than is necessary. Usually the instillation of a few drops of 5 per cent. cocaine solution is the only anæsthetic necessary, and any hæmorrhage is controlled with adrenalin solution. Here I might mention that I find a 5 per cent. solution of cocaine to be safe and efficient for most minor ophthalmic operations, often dispensing with the use of morphia. Weaker solutions do not have the desired effect.

Ectropion.—Another problem which needs careful surgical interference is the correction of ectropion, especially if it has been produced by an over-zealous entropion operation. In this instance scar tissue renders correction more difficult. Ectropion seems to occur after entropion operation when the incision has been made too near the edge of the lid. It is seldom or never seen in the upper lid and is perhaps more prevalent in Chows and Airedales than other breeds. If the condition is the aftermath of surgical interference the eyelid appears puckered and the ectropion often takes the form of a kink in or about the middle of the lid.

To correct this deformity most text-books advise the removal of a V-shaped portion of the underlying lid, going through the whole thickness of the lid, including conjunctiva, and then suturing vertically. Another method is to cauterise the conjunctival mucous membrane, care being taken that the bulbar portion of the eye is protected. This method I have not tried, but in the former I am afraid my technique must have been faulty, for I cannot boast of my successes.

More recently I have worked on the lines suggested by Nesfield ("Ophthalmic Surgery." V. Nesfield), in the treatment of the human and I have been more fortunate. Here I must confess I have only performed the operation on two occasions but I have no reason to believe other cases would be anything but successful.

Operation.—The technique is as follows:—

The lower lid is anæsthetised by the injection of a little "Waite's" solution. The incision is then made to correspond with the everted portion of the lid, any adhesions being freely separated. Next a fold of conjunctiva directly opposite the skin wound is picked up and snipped out with scissors. The edges of the wound are drawn together by means of very fine catgut (No. ooooo, Arnold's) and if the lid incision has been sufficient the everted portion should be in a line with the rest of the eyelid. Sometimes at this stage the skin incision has to be modified. The upper and lower lids are now brought into apposition by means of two or three sutures. The idea of this is for protection and also to relieve tension on the conjunctival membrane. It also prevents the skin wound healing too quickly and nullifying the intended effect of the incision. The sutures in the conjunctiva do not appear to irritate the cornea, but the application twice daily of a little golden eye ointment is useful. The lids are kept closed from five to six days, depending upon the general appearance of the eye.

For the sake of added protection, the eye can be bandaged.

The Cornea

To enter into a discussion on the diseases of the cornea would be attempting too much, so I intend to confine my remarks to corneal opacity and corneal ulcer, together with the complications.

Anatomy.—Before going further, it would not

be out of place to outline briefly the anatomy of the cornea.

Anteriorly it is covered by a layer of stratified epithelium which is regarded as a continuation of the conjunctiva.

Immediately beneath that is Bowman's membrane, similar in structure to the cornea proper. Posteriorly it is lined by Descemet's membrane. This membrane is important in that its rupture leads to direct contact with the anterior chamber.

The cornea proper is made up of fibrous lamellæ, throughout which are interspersed lymph spaces. These play an important part in the nourishment of the cornea, since it is devoid of blood vessels. There is a rich nerve supply which readily responds to painful stimuli.

Corneal Opacity.—Any inflammation of the cornea usually makes itself evident by a haze or cloudiness due to infiltration by leucocytes which are attempting to bring about repair. Under treatment one expects resolution with a clearing of the cornea. Often, however, despite prolonged treatment, absorption is incomplete, organisation takes place, leaving an opacity which may cover a large part of the cornea.

For the moment, I am considering a simple opacity uncomplicated by vascularisation as seen in interstitial keratitis or pannus. One might call the condition persistent corneal opacity which, if very dense, is known as leucoma. I have met with it in puppies, usually unilateral, without any apparent cause, although one always suspects trauma.

The usual history with such a case is that it appeared suddenly. The usual symptoms which accompany keratitis, watery discharge, blepharospasm, etc., were not noticed. Routine treatment being applied, a certain amount of clearing took place, but after about five to six days there was little or no response; in fact, the opacity may be thought to be denser than formally. Of course, one is frequently told that if the opacity could be removed the animal's value would be trebled.

This brings me to a line of treatment with which I have had gratifying success, namely, subconjunctival injection. Do not for a moment think that subconjunctival injections are new, for such things as cyanide of mercury solution, normal saline, etc., have been used in the past, chiefly in the horse. However, I was introduced by Munslow, of Rye, to the use of phenolaine solution as recommended by Nesfield in his treatment of leucoma and corneal opacities in general, in the human.

The solution recommended is:—

Phenolaine	... ...	minims 2
Sterile tap water	...	ad. oz. 1

Of this, 20-40 minims are injected, the amount depending on the size of the dog. The technique of the injection is simple. I use an intradermal syringe carrying a fine Schimmel's needle. An ordinary "Record" syringe can be used, with an adapter carrying the same needle. The only anæsthetic necessary is the instillation of a few drops of 5 per cent. cocaine solution.

The conjunctiva is gripped by ordinary fixation forceps to prevent rolling of the eyeball, and the amount of solution injected is governed by the ballooning of the conjunctiva produced.

Since phenolaine has an anæsthetic action the animal gives no sign of the pain which is said to accompany the use of other antiseptic solutions.

One injection is seldom sufficient, although it is often attended with improvement. They are repeated at intervals of ten to 14 days until the desired effect has been achieved.

I will quote two examples in a dog.

(1) This was an eight-months-old Airedale which had had a triangular dense opacity obscuring a third of the cornea and proving very unsightly, for the last five-and-a-half months. Usual treatment had failed. To cut a long story short, I treated this animal by injecting 40 minims of phenolaine solution every fortnight for ten weeks and by that time the cornea was clear, even under close inspection.

(2) A Scottie puppy, about three months old, with an opacity, covering most of the cornea, which had resisted ordinary treatment for about a month. This puppy received four injections of 20 minims at intervals of ten days. By this time the cornea had cleared sufficiently for the owner to sell it, so I was unable to follow the case further. I have tried the same line of treatment in the deeper forms of keratitis and pannus. In cases of this nature I have been successful up to a point, in that vision has been improved, but I have not yet been able to clear the cornea of all encroaching blood vessels. Cases of pannus with melanin impregnation have shown striking improvement after having been subjected to a short course of treatment. The same result has been obtained in this type of case in a cat after two injections at an interval of a month.

For leucoma, the result of corneal ulcer, this line of treatment proves efficacious. Here, improvement is slow, owing to the density of the resulting cicatrix. Injections at intervals of a month may have to be made for over a year. Time will not allow of further details, but I shall be glad to hear the experiences of anyone present who has made use of conjunctival injection, irrespective of the antiseptic used.

Corneal Ulcer.—To my mind, the two main causes of corneal ulcer are trauma with infection and suppurative conjunctivitis and keratitis. In this second category I place the bilateral ulceration which one so often gets in distemper and it is here that I maintain it can often be prevented.

My intention is to discuss the treatment of

ulcer when established, with the idea of preventing further complications, but first of all let me give my reasons for saying that it can often be prevented.

In my opinion, that which proves our undoing is the faith we put in antiseptic eye lotions without understanding their action. It must be understood that the strength of the average antiseptic eye lotion is not sufficient to destroy organisms, for if it were they would prove irritant and destructive. Their action in the main is mechanical, in that secretions and organisms are washed away.

Therefore, if instead of " a few drops in the eye three times a day " we prevented the accumulation of discharge by flushing out the conjunctival sac more often, we should have less need to fear the worst.

Another common mistake is to use cold applications. Heat stimulates and assists the natural process of repair, apart from adding to the cleansing properties of the agent. In other words, keep the eye clean, even if it means the use of warm water rather than a strong irritating lotion.

The same remarks apply equally well to corneal ulcer when existent, in that hot fomentations will often bring about resolution sooner than more drastic remedies. Naturally, this is not a " cure all " measure, but is of great importance in the initial stages. Not all cases of ulcerated cornea are seen at the commencement of the lesion, and consequently other measures have to be adopted, according to the progress of the ulcer.

Another aid to resolution so often omitted is protection, which can be supplied by means of a padded eye-shield attached to an ordinary muzzle.

It is very often advisable to keep the eye at rest by the instillation of a little 1 per cent. atropine solution.

Since corneal ulcer is sometimes complicated by changes in the iris, atropine helps to prevent adhesions between that structure and the lens (posterior synechiæ).

In very deep ulcer the use of atropine must be guarded, for the increased intra-ocular pressure produced may cause rupture of Descemet's membrane and escape of aqueous humour. It is the rupture of this membrane that one must try to prevent.

On the other hand, the use of eserine solution to reduce intra-occular pressure is inadvisable in that it irritates the iris and tends to increase iritis, making the risk of posterior synechiæ greater.

In the case of an ulcer which has not traversed the whole thickness of the cornea, cauterisation with carbolic acid on the end of a pointed stick or by the application of calomel is useful.

It is, however, the ulcer which has penetrated on to Descemet's membrane which calls for serious attention. Unless the condition is relieved, there will probably be rupture with prolapse of the iris, resulting in a staphyloma, with adhesions between the iris and the back of the cornea—anterior synechiæ.

In all the cases of staphyloma I have met I have not yet been successful in preserving the sight in the affected eye, therefore I am more concerned with keeping the structure behind the anterior chamber intact.

One must anticipate rupture of the cornea. The last stage prior to rupture is represented by a keratocele which is nothing more than Descemet's membrane herniated through the cornea proper. Tension must be relieved by paracentesis.

Operation.—This brings me to a surgical procedure which the majority of veterinary surgeons are loth to adopt. This ought not to be the case, for it is simple and, performed with aseptic precautions, carries with it little risk.

It should not be done as a last resort, since at that stage any slight struggling on the part of the patient during the operation may result in rupture.

It should be recognised that relieving intra-ocular pressure lessens pain and aids resolution by allowing an easier passage of lymph through the cornea. If paracentesis of the anterior chambers were performed more often there would be fewer cases of staphyloma.

To obviate struggling on the part of the patient it is often advisable to administer a small dose of morphia.

The conjunctival sac is washed out with warm boracic lotion, 2½ per cent. hydrarg. perchlor., 1-5,000, or normal solution. A few drops of 5 per cent. cocaine are then instilled.

The instruments required are fixation forceps, a spatula, speculum, and a broad paracentesis needle. Instead of the latter a Graefe cataract knife can be used. The needle or knife is sterilised by keeping in surgical spirit or immersing in water which has reached boiling point. They should not be boiled or the sharp edges will be lost.

The point of puncture is at the corneal-sclerotic junction, preferably in the lower half of the eye. To prevent movement of the eyeball the adjacent conjunctival membrane is held by fixation forceps.

In performing the puncture one must see that the needle enters almost parallel with the back of the cornea to avoid injuring the lens and iris.

The aqueous humour must be allowed to escape slowly, otherwise one may get prolapse of the iris and dislocation of the lens.

It is not intended to allow all the aqueous humour to escape whilst the needle is inserted, and it is consequently withdrawn. The less dangerous instrument, the spatula, is now used. By inserting this instrument, and gently depress-

ing the lower lip of the wound, the fluid is allowed to escape slowly without disturbing other structures.

The wound soon closes and improvement in the ulcer is noticeable the following day.

If it is deemed advisable to let down the anterior chamber again it can easily be done by re-introducing the spatula through the old puncture wound.

Hypopion.—Finally, before leaving the subject of corneal ulcer, I should like to mention hypopion—often described as pus in the anterior chamber. This often accompanies deep corneal ulcer, although it may not be noticed if there is much keratitis.

The condition is said to be due to toxins passing through Descemet's membrane, setting up an irritation of the iris and ciliary body with consequent outpouring of leucocytes. It has been shown that organisms cannot pass through this membrane, hence if there be no actual perforation the so-called " pus " in the anterior chamber should be sterile.

The presence of hypopion, which is often regarded as a phase of corneal ulcer, gives no cause for alarm, despite the fact that it is threatening in appearance. In the immense majority of cases it becomes absorbed in the course of a few days if the corneal breach is showing signs of repair.

Occasionally there is deposition of fibrin and absorption does not take place. The yellowish-looking mass still lies on the floor of the anterior chamber, even though the ulcer is no more.

Here again, in course of time it may disappear, but there is less likelihood of this happening than in the former case. It often proves unsightly and is best removed.

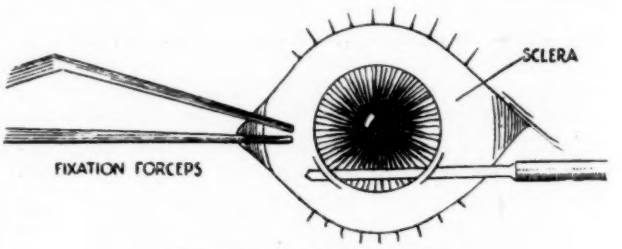
Operation.—The procedure, with strict aseptic precautions, is much the same as for paracentesis, except that it is carried a step further. A general anæsthetic is desirable, although the operation can be performed under morphia and a local anæsthetic (5 per cent. cocaine).

A Graefe knife is used and enters the anterior chamber at the corneal-sclerotic margin, about $\frac{1}{8}$-in. above its lowest limit.

On entering the anterior chamber a little of the aqueous humour is allowed to escape before the blade is carried parallel across and brought out at the other side. The knife now cuts through the cornea between these two points. The " pus " then escapes with the rest of the aqueous humour.

The incision should be made so that a very small flap of sclera is attached to the cornea. This facilitates union after the operation.

After-treatment consists of the instillation of a little 1 per cent. atropine solution and bandaging. Usually no suturing of the wound edges is required. In 24 hours the eye will have reached its normal size again.



Operation for Hypopion

This brings me to the end of a very sketchy paper. Numerous details have been omitted, as I have attempted as far as possible to adhere to the surgical aspect of these problems.

An animated discussion, however, will prove it has not been a wasted effort.

. . . . .

Discussion

The discussion on Mr. Formston's paper was opened by the Hon. Secretary, Mr. J. B. White.

Mr. White said:—

Before proceeding any further, I should like to thank Mr. Formston very much for coming down and giving us this paper, and particularly so because he has chosen to describe conditions with which we are regularly meeting in practice.

The ordinary practitioner is often rather loth to try out new surgical methods unless personally introduced to them by some fellow practitioner—and that is where we have to thank people such as Mr. Formston who do so and then put their results before us.

Coming to the question of suitable anæsthetics in eye work, I must say that for any delicate operation I like the dog to have a dose of morphia, as I find that even though one's local anæsthetic is perfect, the mere fact of handling his eye is sufficient to make the dog fidget.

Luckily, I have not met many cases of ectropion, but I should imagine one has to be decidedly drastic to produce it, in operating for entropion. I think in Airedales and Chows, in which the eyes are so often too small, it helps if the external canthus is incised a little. When this is done one can bring the lid back into position without removing quite so much skin.

In operating for ectropion, does Mr. Formston find that he gets any irritation of the eye from the inside sutures, and what type of suture does he employ for temporarily closing the lids? I have found that any suture which touches the cornea is likely to cause ulceration.

With regard to persistent corneal opacity, I think that faulty nutrition and metabolism play quite a large part in their causation, as I have seen several bad opacities of one or both eyes which resisted all lines of external treatment, only to clear up suddenly when least expected. I think the point mentioned of their being found often in puppies rather corroborates this, and mixed gland extract with a meat diet is a useful adjunct to treatment. In the operation of subconjunctival injection, is the phenolaine solution actually injected between the conjunctiva and Bowman's membrane? I should imagine this would be a rather ticklish proceeding.

In the treatment of corneal ulcer I agree that antiseptic lotions often fail, but I think it is because they are used in too great concentrations and so are irritant.

Warm fomentations and bathing, to my mind, tend to make the conjunctiva too œdematous, and in the case of corneal ulcer I should have thought

that warm fomenting would increase the risk of new vessels running onto the cornea.

For the sore, acute case, I have not met anything that gives better results than Protosil ointment, or, failing that, plain boracic lotion containing some local anæsthetic, continuing this till the acute stage is past.

I agree that darkness is a very necessary adjunct to treatment, but I am rather surprised to hear that the essayist gets satisfactory results with an eye-shield.

Does Mr. Formston find that a single tapping of the anterior chamber is sufficient in most cases of corneal ulcer, as I understand the chamber refills within 24-36 hours?

There is one other condition I should like to ask about, and that is the treatment of the luxated eye where, owing either to the delay in seeking advice or else to the extent of post-orbital hæmorrhage, it is impossible to get the eye properly back in the socket. Even if one gets it back sufficiently to suture the lids over the eye, the results are usually disappointing and one finishes by having to remove the eye.

Beyond these few observations I think I have little to add except to thank Mr. Formston once again for his very capable paper.

Mr. J. F. D. Tutt (the newly-elected President) first congratulated Mr. Formston upon his paper, which was, in his opinion, of great clinical value to the practitioner. He had few criticisms to make, but would be interested to hear the strength of the golden eye ointment used by the essayist, as this varied considerably. In regard to cauterisation, he used silver nitrate, washing off the excess with normal saline solution, which precipitated the non-irritant silver chloride. He found calcium sulphide medicinally of value in the treatment of corneal ulcer, and argyrol an excellent eye dressing.

Mr. W. Caudwell added his appreciation of the paper and mentioned the use of silver nitrate as caustic for corneal ulcer.

Mr. Geo. N. Gould voiced his thanks to Mr. Formston and then remarked that he had very frequently met the condition of hyperplasia of the Harderian gland in dogs. In some cases he had removed the gland and in others the whole membrana nictitans, both processes giving satisfactory results. He had received no complaints in consequence of complete excision of the membrana, from the point of view of exhibition subsequently, but agreed that excision of the gland only was the best surgery. In regard to ectropion, he had used the V.Y. operation with success. Some months ago he had been consulted regarding a red setter in which the eyelids had been operated on for entropion, leaving the eye in a most peculiar condition. When the dog was looking at one the upper lid covered half the cornea, and the lower lid showed marked entropion. It was obvious that the eyelids required lifting back to a normal position. He took up a piece of skin above the orbit, at a slight angle to the external canthus, sufficient to effect this purpose and to correct the entropion. Fixing the piece of skin between "pins" he excised it (using all aseptic precautions) and sutured closely. The skin excised was extensive—about three-quarters to one inch wide and one to one-and-a-half inches long. Healing occurred by first intention, the eyelids resumed their normal position, and the ectropion was removed by the operation. He had since tried a similar operation (on a less extensive scale) on two cases of ectropion, with success. The amount of skin taken up was that sufficient to correct the trouble present, the site of the operation being above the external canthus three-quarters to one inch from the edge of the eyelid, at a slight angle.

In regard to phenolaine—he would certainly give it a trial—but was rather sceptical of the possible effects. Many opacities tended to disappear with or without treatment; in fact, many disappeared when treatment ceased, if the drugs used had been too irritant. Dionine had been "boosted" as a remover of opacities, but in his experience it had not proved of value. How did phenolaine effect the removal of opacities?

In regard to fomentations for ulcerating conditions of the eye, he had used both hot and cold applications and favoured the use of cold or tepid water as a cleansing agent. Eye dressings, to be effective, should, as far as possible, be non-irritant. He found that no "stock" dressing could be used indiscriminately, in that the various breeds of dogs, and even various dogs of the same breed varied in their sensitiveness considerably. Collosol argentum was a non-irritating silver preparation of value.

He used injections (intra-muscular) of sterile milk as an adjunct in the treatment of corneal ulcer.

Fluorescein was very useful to detect early corneal ulceration. In cauterising he always dried the ulcer first with blotting paper to avoid any possible "running" of the caustic used. He preferred carbolic acid, applied by means of a purified match-stick.

He had used the eye-shields mentioned and kept two or three of various sizes for eye cases. He considered these of great value in shading the eye and in protecting it from the infliction of further injury.

He had practised paracentesis fairly frequently and had found it of assistance in some cases of prolapse of the eyeball in which reduction was proving very difficult.

He had performed an operation for hypopion—cutting right across the cornea and suturing. It left little mark afterwards. The condition frequently occurred as a sequel of jaundice and in many cases of jaundice he had noticed an actual hæmorrhage into the anterior chamber which subsequently dispersed completely during recovery from the disease.

One additional question he would like to ask: What treatment did Mr. Formston recommend for districhiasis?

Mr. J. T. Turney asked what treatment Mr. Formston recommended for epiphora.

The Reply

Mr. Formston then replied, thanking the speakers for their kind remarks. He would like to point out that his paper dealt with surgery in relation to the conditions mentioned and was not concerned with adjuncts to treatment such as gland extracts, etc., all of which he agreed were of excellent value in suitable cases.

He considered increase in intra-ocular pressure a potent cause of trouble in the eye. This increase was often so great that the cornea received insufficient nourishment. The removal of that pressure allowed the freer flow of lymph and, in consequence, better nutrition.

In reply to Mr. White, Mr. Formston said that warm fomentations did not produce vessels—these arising as a result of an effort to effect repair, and the condition being known as pannus. The stimulation of warm fomentations aided repair. Treatment of eye cases often gave excellent results when conducted at home, in view of the fact that repeated dressings and foments could be applied.

The sub-conjunctival injection was made beneath the conjunctiva covering the sclera—the

conjunctiva terminating at the corneal-sclerotic junction.

In paracentesis it might be necessary to repeat at intervals of 24-36 hours, and this should be done at the old point of puncture.

In luxation of the eyeball he often used adrenalin after the application of warm foments to cleanse and revitalise. He then applied a warm swab of cotton-wool, exerted pressure, and at the same time lifted the eyelids. This was the best method of inducing return of the eyeball. He found splitting the external canthus of value in some cases, to facilitate replacement, but had never tried paracentesis. In such cases there was often hæmorrhage in the vitreous humour or beyond it, although the anterior chamber appeared to be clear. The sclera was usually very congested. A point often overlooked was that, although a luxated eye might look very well on replacement, it was dangerous to give a good prognosis, as one often found that sepsis developed subsequently, with large increase in the size of the eyeball. It was not unusual, in cases following a dog bite, to find tooth marks in the fossa above the orbit, and in such cases abscess formation frequently resulted behind the eye in the orbit.

There did not appear to be any irritation from the catgut sutures in the operation for entropion. The ointment was introduced into the conjunctival sac.

In reply to Mr. Tutt, Mr. Formston said that he used 2½ per cent. golden eye ointment. He considered silver nitrate liable to misuse as a caustic agent in eye cases. It was useful in solution for catarrhal conjunctivitis. The sticks were not sufficiently pointed for cauterising corneal ulcers and might involve damage of the surrounding tissues. They were all right for a protruding ulcer, as in staphyloma. Similarly in solution, using a camel-hair brush for application, there was liability of damage to surrounding tissues. Saline was best to clear away excess of the caustic.

In reply to Mr. Gould, Mr. Formston said he was surprised to hear that he removed the membrana nictitans in some cases of hyperplasia of the Harderian gland. In regard to the V.Y. operation for ectropion, it was the standard one, but he was more interested in the second one described by Mr. Gould, which he would like that gentleman to illustrate on the blackboard subsequently. Phenolaine had an antiseptic absorbent action influencing especially the cornea. It appeared to hasten resolution of opacities of the cornea, and he had great faith in it.

Drying an ulcer before the application of the caustic was an added precaution to avoid injury to surrounding tissues. He had not practised paracentesis on a luxated eyeball.

In districhiasis, removal of the offending eyelashes by ciliary forceps was the usual treatment. As Mr. Gould had said, these eyelashes usually grew again, necessitating repeated removal with depilation forceps. The entropion operation was often of value.

In reply to Mr. Turney—entropion might prove of value in epiphora, although it might appear to be contra-indicated. The usual cause of epiphora was blockage of the tear duct, and one should attempt to clear this.

This concluded the discussion, and subsequently Mr. Formston demonstrated the subconjunctival injection of phenolaine, paracentesis, and excision of a hyperplased Harderian gland on different cases, requiring these respective treatments, supplied by the courtesy of Professor Wright and Miss Lock.

OBSERVATIONS ON THE TESTING OF CATTLE FOR TUBERCULOSIS BY THE DOUBLE INTRADERMAL METHOD*

A. SPICER, F.R.C.V.S.
New Oxted, Surrey

I do not think any apology is needed for introducing this subject to your notice, because it is becoming more important every day and it is essential that the profession as a whole should settle down and come to some agreement regarding a common standard in connection with the intradermal test. If this is not done, the results obtained by individual veterinary surgeons must be contradictory, the prestige of the profession will suffer and the test itself fall into disrepute. All this has been brought to my notice very forcibly by an event which happened in my own practice.

In April, 1931, I tested a herd of Jersey cows and found a few positive reactors. In July the owner died and the herd had to be disposed of. I tested about 16 to 18 animals, mostly heifers, three of which reacted. The reactors at the April test had not been removed from the herd. The sale was held in September and 13 heifers in calf were purchased by one buyer and taken to Cambridgeshire. These heifers had all passed the test, some in April and some in August. About a month later I received a letter from the buyer's veterinary surgeon to say he had tested the heifers and they had all reacted. (I understand they were all tested again later by a veterinary surgeon sent down by the Ministry of Health and that at this test all reacted except one.) This came to me as a shock. I have been keenly interested, all my professional life, in testing cattle, and have used the double intradermal method since its inception and thought I knew something about its application and the interpretation of results. Naturally, in the case quoted there was room for a considerable margin of error on my part, because the cattle that failed in April were not removed from the herd and some of those which passed then might have been infected, and in the August test there might have been some infected animals which were not yet sufficiently sensitised to respond. On the other hand, my experience, even with a herd tested for the first time, is that 100 per cent. reactors do not occur: I have found from 50 to 70 per cent. to react, but never every one. Also in this case the animals had not been housed but had been running in open yards and fields and had all passed the test at some time.

There are three methods by which one can

* Paper presented to the South-Eastern Division, N.V.M.A., on the occasion of the Annual Meeting, held at Tunbridge Wells, on March 16th, 1933.

endeavour to improve one's knowledge of the test: (1) test a number of animals and follow them to the slaughterhouse for detailed examination. This method is denied to the ordinary practitioner. (2) Have lessons from someone who is an authority on the subject. This is expensive both in money and time and the results are doubtful, because the pupil is very soon left to his own resources and doubt and hesitancy will once more be his lot. (3) Use a control test. This is undoubtedly the best method, and if used a few hundred times should soon give the practitioner a definite knowledge of what to expect. He can compare the measurements obtained and by careful palpation of the two swellings, and noting especially evidence of heat and diffuseness, will soon begin to realise what is a reaction and what is not.

I have carried out the control test on about 200 animals now and you have before you figures showing measurements that may be of interest.

Some examples of Measurements in connection with the Double Intradermic Testing with Tuberculin

A few examples selected from about 160 cases in which control fluid was also injected.

(*a*) Cattle which Passed the Test

Tuberculin.			*Control Fluid.*		
Before Injection.	48 hrs. after 1st Injection.	24 hrs. after 2nd Injection.	Before Injection.	48 hrs. after 1st Injection.	24 hrs. after 2nd Injection.
6	7	8	7	8	10
7	8	8	6	8	9
6	9	11	6	8	12
5 (5)	6 (6)	9 (9)	6	9	12
6 (6)	5 (8)	6 (9)	4	6	8
6 (8)	8 (11)	11 (13)	6	12	12
7	10	10	7	10	12
6	10	13	6	9	13
9	10	12	9	11	15
6 (8)	6 (10)	7 (12)	6	9	11
8	11	14	8	10	11
5	10	10	5	10	10
6	10	12	6	10	10

( ) = Previous test. Measurements are in millimetres.

(*b*) Cattle which Failed to Pass the Test

8	17	22	8	10	15
8	12	16	8	8	11
7	11	12	7	7	7
5	10	15	5	6	10
7	11	16	6	9	10
4	9	13	4	9	9
9	12	20	9	11	15
8	11	14	8	10	11

You will note considerable variation in the two tests; in many cases the control swelling is larger than the test swelling and in some the former measures twice the preliminary skin measurement. In this connection it must be remembered that when the test was first introduced we were taught to regard with grave suspicion any swelling that was nearly or quite double the original skin measurement. It is almost suggested now that we should throw away our calipers and rely on what we can learn by palpating the swelling. The figures before you show the variation that may arise in the local reaction. Nothing has been said about diffuseness because I find that very difficult to describe; as a matter of fact, none of the swellings was diffuse, except in the case of those marked as positive reactions. The reason why there are so few failures is that I was largely dealing with herds that had been tested several times.

I propose now to mention a few points in connection with the test that I think should be discussed. The first is the original skin measurement. I have found that, on comparing the measurements at one time of testing with those taken at another test some time later, variations occur. An example of this is that of the second case in the table—a bull, and tested on September 5th the skin measured 8 mm., while on November 25th the measurement was 6 mm. I have also found differences in the two sides of the neck when measurements were made at the same time.

I often wonder if the animal's general health has any bearing on the skin reaction produced by tuberculin. I have found that you will test a herd and every animal passes the test without the slightest suspicion of a reaction occurring. The same herd is tested six months later and quite a number of reactions are found of a type that, while not being positive, cause you to wonder if a breakdown is in process. When tested in a further six months the reactions are again regularly negative. I have formed the opinion that this type of finding may be somewhat similar to your own case in which you prick your finger several times without any local irritation but on one occasion, probably because your blood was out of order, a decided local reaction occurs which may be extensive.

The next point is the cleansing of the skin before injecting the tuberculin. I expect the majority of us simply clip the hair, some wash with soap and water, while others use an antiseptic dressing. How do these treatments influence the test? In the majority of cases simple clipping of the hair is followed by no bad results. It is rare that any infection takes place. Washing with soap and water should be quite safe, but, in my opinion, the use of any irritant antiseptic lotion should be avoided. I well remember that in my early days I used to apply 5 per cent. carbolic acid to the skin before injecting tuberculin subcutaneously and quite often I found an œdematous swelling at the point of injection. I also find that the use of

alcohol on the skin may be followed by swelling; for example, in one case when the skin was not cleansed the measurements were 6-8, but when I cleansed the skin with alcohol the results were 6-11 and 6-12.

What do we mean by the term " diffuse swelling? " To my mind, it means a swelling starting from the point of injection and gradually fading into the surrounding tissue as opposed to a typical non-reaction in which the swelling feels like a pea or bean which has been inserted under the skin and which has a definitely clear-cut edge. In this connection I would like to say that in all the 200 control injections I have made, however large the swellings may become I have never found any sign of diffuseness. A further point in this connection is the occurrence of an œdematous swelling in a few cases *below* the injection swelling but apparently hardly connected with it at all. I find such swellings distinctly flabby. I always make a practice of calling such reactions positive, but would like to know if you have experienced such swellings and how you interpret them.

Another point is the use of the subcutaneous test in cattle which give a doubtful reaction to the double intradermic test. I have tried it several times, but I find it of no use because I have always had negative results, although the cattle have eventually proved to be tuberculous.

The last point to which I wish to refer is the question of the infection of a clean herd and its causes. One of the fairly obvious causes is that the herd never really was clean—due to the failure to recognise all the reactors consequent on misinterpretation of the reaction produced in the double intradermal test. I expect most of us could call to mind such instances. Another cause is the importation of cattle. It is my opinion that this is a dangerous practice, for even though such imported animals are tested and passed as negative reactors before their introduction to the clean herd, there is always a risk if they do not come from another clean herd. I find also that the straying of cattle in the clean herd to land on which tuberculous animals are grazed is one of the causes of re-infection.

I do think, however, that the double intradermal test is to be recommended if for no other reason than that the " clever " farmers and dealers realise its value and avoid it if they can, preferring the subcutaneous test.

Discussion

Major G. W. Dunkin congratulated the President (Mr. Spicer) on his choice of a subject for discussion and said that he believed and hoped that the intradermic method would be more and more used as time went on, because the method was certainly the most convenient to use and the results were good, provided tuberculin of high potency was used. He briefly referred to two points in connection with the paper. The first was the question of calipers. He hoped they would continue to be used, for, as far as he could see, the only way to keep a permanent record of readings was by recording measurements; in fact, without accurate measurements being taken the test was not of so much value. The other point was the description of a reacting swelling. To describe such a swelling was quite a difficult matter. Perhaps the best way was to become acquainted with the characters of a negative swelling and from this, positive reactions could be judged.

Major L. P. Pugh said that he agreed with Major Dunkin that the use of calipers should be continued, if only for the reason that results could be put down on paper. He thought that control fluid was not necessary, as it might complicate the reading of the reaction; a positive swelling was quite definite compared with that produced in a negative reaction. He still found, however, a number of reactions which presented some difficulty in their interpretation—where it was difficult to say whether a positive or a negative reaction had been obtained. He thought there must be some explanation for the doubtful reactions and he asked if anyone knew of a hard-and-fast method whereby the point could be settled clinically without resort to *post-mortem* examination. In some doubtful cases Major Pugh felt that the only thing to do was to pass them as negative reactions.

Colonel P. J. Simpson (President, N.V.M.A.) congratulated Mr. Spicer on his paper and indicated that he had met with many varied interpretations of the intradermal test. He was not sure, however, that the test was always to blame; in some cases the methods of application and interpretation were not above criticism. In his experience, with the use of a suitable needle and syringe, as well as calipers, and with a fixed idea of what constituted a *negative* reaction, the test was more or less straightforward. He had now a great amount of faith in the test.

Mr. H. Taylor thought that they got too many doubtful reactions. In his experience tuberculin from some sources gave a higher percentage of doubtful reactions than that from other sources. He thought the fault of the test was that it had no recognised standard as compared with the subcutaneous test. In the latter test the standard which condemned or passed an animal was a certain temperature: if, after tuberculin was injected, the temperature rose above a certain point, the animal was automatically classified as a reactor. He had no experience of the use of a control broth.

Mr. A. D. McEwen said that he had never done any intradermal tuberculin testing, but would refer to a herd of which he had knowledge and in which such testing was carried out. For two years all the cattle passed, then after calving the herd was again tested, when three animals failed to pass. One month later a re-test was carried out, which resulted in one animal being classified as a positive reactor and five as doubtful reactors. If " doubtfuls " were to be classified as " positives," then at that test there were six positive reactors. Different tuberculins were used at those two tests. The Ministry then carried out a further test on the doubtful cases. One had been removed from the herd and the result of the test on the other four was one positive and three definitely negative. At the same test a further five positive reactors cropped up among those which failed to react at the former tests. He thought that, from results such as those, the test did not seem to be too satisfactory. Mr. McEwen

also mentioned that the American method was to make a single injection into the caudal fold.

Mr. C. Roberts wondered what would be the result of a diagnosis made on skin measurements alone. In the light of the results of the testing at Folkestone last year, he would expect very much variation of opinion.

Mr. W. D. Halfhead said he was well satisfied with the test, and in his experience *post-mortem* examination had always borne out his interpretation of the reaction.

After several other speakers had made comments, Mr. Spicer briefly replied, thanking the various speakers for their remarks and observations. He was of the opinion that the double intradermal test was to be preferred to the subcutaneous test for many reasons, among which was the fact that badly affected cattle might fail to show a reaction to the latter test. He also thought that the double intradermal test was better than the single test as carried out in America.

Edinburgh University and the "Dick" College

Scheme of Affiliation

The report of the Business Committee of the University of Edinburgh contains a draft scheme of affiliation between the University and the Royal (Dick) Veterinary College. The scheme states that a Board of Veterinary Studies shall be constituted for the purpose of advising the Senatus and the Governors of the College on matters relating to courses qualifying for degrees or University diplomas in veterinary science. The Board shall consist of the Dean of the Faculty of Science, the Dean of the Faculty of Medicine, and those professors and lecturers in the University of Edinburgh whose courses qualify for graduation in veterinary science, and the principal of the College and those College professors whose courses qualify for graduation. The Dean of the Faculty of Science shall be the Convener of the Board.

* * * * * *

H.M. STATIONERY OFFICE PUBLICATIONS

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	Price Net s. d.	*Post Free.* s. d.
House of Lords Papers and Bills. (Session 1932-33)		
(74) Protection of Animals Bill	0 1	0 1½
War Office.		
Animal Management, 1933 (57-5-0-33)	3 6	3 11

* * * * *

The larvæ of ascarids (*Belascaris*) have been found in the lungs and tracheæ of fox cubs that were stillborn, and it is considered that this prenatal parasitism is by no means a negligible cause of the death of carnivores *in utero*. It is recommended that silver fox cubs be systematically dosed with capsules of tetrachlorethylene at three weeks of age and at monthly intervals thereafter. The danger from ascarids has passed at the age of three months, but treatment for *Uncinaria* should be continued longer.—*Vet. Med.*

The Veterinary Record

May 20th, 1933.

A LEGAL LANDMARK IN SOUTH AFRICA

ELSEWHERE we reproduce the more important Sections of a new Veterinary Act which has just been passed into law for the Union of South Africa. The Bill has been urged upon the House of Assembly for many years by the South African Veterinary Medical Association, and we heartily congratulate the Council and Members of that Association on at last obtaining so satisfactory a recognition of their status. The Act does not prohibit unqualified practice, but it goes somewhat further than our Veterinary Surgeons Act. The latter provides (by Section 17) that no unregistered person may take a title "*stating* that he is a veterinary surgeon or a practitioner of veterinary surgery or of any branch thereof, or is specially qualified to practise the same." When, therefore, an unregistered person described his place of business as a "canine surgery" it was held that that was no infringement of the Act, because the description given to the premises, whatever it might be thought to *imply*, did not *state* that the owner was qualified. A perusal of Section 17 of the South African Act will show that there is now in South Africa much better protection of the public than in this country. There no unregistered person may "by any means whatsoever" hold himself out to be a veterinarian, or use any name "calculated to lead persons to infer that he possesses" a veterinary qualification. The fine for an infringement may be as much as £50, whereas here the maximum fine is £20.

The provisions regarding professional discipline are also an advance on those technically in force in this country. Here the Council of the Royal College is given the power to strike off the rolls any veterinary surgeon who is, after due enquiry, found guilty of conduct disgraceful in a professional respect. In actual practice the Council, like the General Medical Council, which has similar powers, endeavours to mitigate the severity of this penalty, where it is considered proper to do so, by warning the accused and postponing judgment for six months in order to give the delinquent an opportunity to reinstate himself in good professional standing. In South Africa the Veterinary Board is definitely given a choice of three penalties:

reprimand, temporary suspension, or erasure. The Board also has the power to summon witnesses and to pay fees and travelling expenses, a power much more necessary in South Africa, where the distances are so great, but the want of which in this country is a distinct handicap to the Registration Committee.

The provisions of the Act for the recognition of diplomas granted outside the Union are very important. The Act definitely lays it down that no diploma granted in a foreign country may be recognised as entitling to registration in South Africa, unless the South African diploma is recognised for a similar purpose in that foreign country. The South African diploma is not recognised in this country for the purpose of registration in the Register of Veterinary Surgeons, but graduates from Pretoria are allowed to sit for the Final Examination after attendance at a British College for one complete Session. Holders of the diploma of M.R.C.V.S. will not, therefore, in future be entitled, if they wish to practise in the Union, to claim registration in the South African Veterinary Register except on similar conditions.

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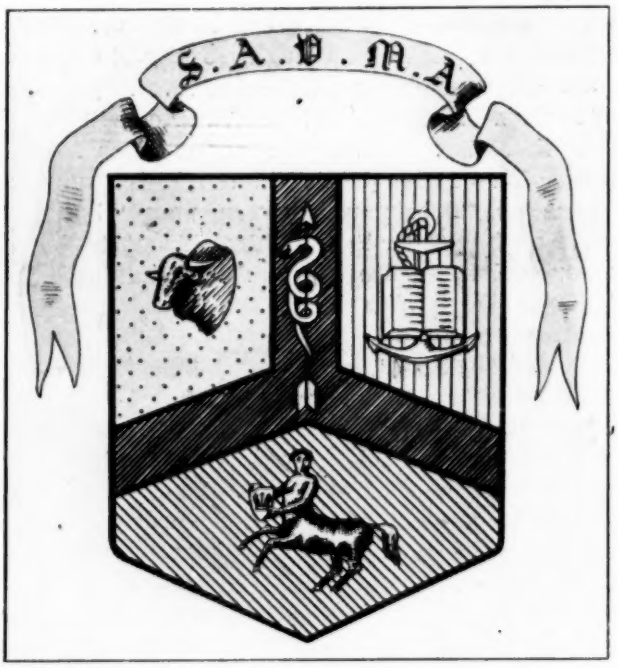

We take the opportunity of congratulating the S.A.V.M.A. on acquiring a Coat of Arms, of which we have pleasure in reproducing an illustration. It has been designed to indicate the relation of the South African Veterinary Association both to South Africa and to this country. The Shield is divided into three fields, of which the colours are gold, red and green, as in the Arms of the Union. The partition dividing the fields is of maroon, the colour used by the Natal Volunteer Veterinary Corps in 1899, and the colour of the R.A.V.C. and the R.C.V.S. The head of an Africander bull (maroon) occupies the dexter field (or), the Crest of the University of Pretoria in silver occupies the sinister field (gules), and the Crest of the R.C.V.S., in black, occupies the base field (vert). The medical nature of the profession is shown by the arrow piercing a serpent on the upper limb of the partition. The motto ***Pristinæ virtutis memores*** is that of the 8th Hussars (Light Dragoons of 1799), to which Thomas Burrows, the first veterinarian in South Africa, who qualified in London in 1799, was attached. The Coat of Arms is thus emblematical of the past and the present, and its motto a good augury for a future of high endeavour and enduring achievement.

Clinical and Case Reports

LUXATION OF THE CERVICAL VERTEBRÆ*

W. A. DOUGHTY, M.R.C.V.S.
Alwick

Some years ago I was called to attend a young cart mare suspected by the owner to be suffering from strangles or some throat trouble. Upon arrival I found the animal standing in a loose-box with the head and neck depressed and twisted round to the right in a peculiar manner. There was considerable swelling of the head and pronounced dyspnœa. Examination showed that the head could neither be elevated nor straightened, and that on the left side of the neck the muscles were swollen and rigid, producing a distinct convexity. On the right side the reverse was the case, where a concavity was formed, into which I could place, practically, both fists.

On the previous day the mare had been cast in the stall, but, after being freed, no special notice was taken of her condition until signs of dyspnœa appeared. The injury was, therefore, of some 24 hours' standing. I concluded I was dealing with dislocation of the cervical column, probably of the fourth and fifth cervical vertebræ and, after a grave prognosis, decided to attempt reduction.

Reduction.—It was considered impossible to reduce the dislocation without first endeavouring to relax the strained and rigid muscles on

* Received through Captain W. Lyle Stewart, M.R.C.V.S., *Record* Representative for the North of England Division, N.V.M.A.

the left side of the neck and the question was how best to accomplish this. I was afraid to cast and use chloroform, lest the heavy animal should sustain further injury. I remembered a hint given in the *Veterinary Record* by a member, whose name, unfortunately, I have forgotten, and that was the use of hot water. Consequently I had hot fomentations applied continuously round the neck for about two hours, the cloths being wrung out of water and applied as hot as possible. A flat board was then placed along the concave side of the neck and held by two assistants while, with my two hands placed over the convex swelling on the opposite side, the full weight of the body was exerted in an endeavour to replace the bones; immediately a welcome report was heard by all present, when the dislocation was reduced.

After-treatment consisted of suspending the head from the stall pillars by sacking and ropes and gradually raising the head daily. Recovery was complete in 14 days and this mare worked satisfactorily for several years.

I was reminded of this animal by a similar case which occurred recently in an older horse. Again this case responded completely to the above treatment, but not until the second or third attempt at reduction.

Since this treatment has proved very serviceable to me, I pass it on in the hope that it will prove equally useful to other members should they have found other methods unsuccessful.

One point remains to be considered. I am aware that complete dislocation of the bones of the vertebral column almost always ends fatally, due to injury of the spinal cord; in the cases which recover a doubt must exist as to whether the luxation concerned the body of a vertebra—complete luxation—or one or other of the oblique processes of the bone—sub-luxation. The cases which I have related were, in my opinion, cases of complete luxation because, at the moment of reduction there was, in both cases, a distinct report as the bones returned to normal position and I can scarcely think that these reports were due to other than the reversion to apposition of the vertebral bodies.

* * * * *

SHORT NOTES OF SOME REMARKABLE CASES OCCURRING IN THE COURSE OF VETERINARY INSPECTORSHIP DURING THE PRESENT YEAR

J. HOWARD JONES, M.R.C.V.S.
Chief Veterinary Officer, Glamorgan

(1) Pus, issuing from an apparent abscess formation in the popliteal region, of an in-calf cow, in good condition, revealed upon microscopical examination, thousands of tubercle bacilli to be present.

. . . . .

(2) A second case (of which I enclose photograph), of the hind quarter of a cow, also in good condition, in which, as will be seen, the gland extended a very considerable distance exterior to its ordinary place of concealment. This mass was, of course, full of a tuberculous liquid, golden yellow in colour.

. . . . .

(3) A cow found to be showing typical signs of cerebro-spinal meningitis: (*a*) total blindness; (*b*) holding her head at an extraordinary angle; (*c*) total lack of co-ordination of movement. *Post-mortem* showed a most advanced form of generalised tuberculosis throughout.

. . . . .

(4) A four-months-old calf, in which the prescapular, submaxillary, and precrural glands were outstanding, being visible from a long distance. *Post-mortem* showed the most perfect display of the whole of the lymphatic system, tiny little glands and the most minute lymphatic vessels being marvellously exhibited. Prolonged and minute search, however, failed to reveal any tuberculous lesion.

. . . . .

(5) A sample of milk collected for the purposes of biological investigation, on its arrival from the producing farm at a retailer's

premises, proved tubercle positive in one month's time.

A careful examination, thereafter, of the producing herd, failed to detect any, even slight, abnormality in any cow's udder. During the subsequent conversation with the producing owner, the fact was elicited that at the time the sample had been collected there had been employed at that farm, as a milker, a lad who had been noticed to cough frequently, and upon the owner's wife finding evidence that this lad had coughed up blood, the owner had instantly dismissed him. Further enquiries revealed the fact that this lad was one of a family of eleven children, two of whom were then inmates of a home for consumptives. Further samples of the milk collected, and subjected to biological inoculation, have proved negative.

Abstracts

[Infectious Buccal Papillomata of Dogs. De Monbreun and Goodpasture. *American Journal of Pathology,* January, 1932, from *Récueil. de Méd. Vét.* Vol. 109, No. 2.]

There occur not uncommonly in the mouth of dogs crops of papillomata of an infectious nature, the histological characters of which are closely related to human warts. The etiological rôle of certain cellular inclusions in old lesions here ought to be ascertained.

The infection is more commonly met with in old than in young dogs, though both are liable to attack. The incubation period is about a month. Cure is spontaneous, more rapid in the natural disease than in that experimentally produced, and a first attack gives immunity. By filtrates the malady may be transmitted from dog to dog but not to the rabbit, mouse, guinea-pig, cat or monkey.

The virus possesses a strict specificity for the buccal mucosa.

Virulent tissues macerated in equal parts of glycerine and salt, as well as frozen virulent material, remain active for a long time. Exposed to a temperature of 58° C. the virus loses its virulence.

W. R. D.

* * * * *

[Antirabic Vaccination in the Dog. (Trans. title.] Dervillez, A. (1933.) *Recueil de Méd. Vét de l'Ecole d'Alford,* cix, No. 3, 142-143.]

This short article upholds the stringent laws against rabies in France. The author mentions the various types of vaccine available: a glycero-phenolised type devised by Umeno and Doi in Japan; a formalised type devised by Plantureux in Algeria, and an etherised type devised by Remlinger and Bailly in Morocco. He states that antirabic vaccination is now largely practised in Japan, Germany, United States, Portugal and Jugoslavia.

He mentions some of the drawbacks of such vaccination, which include difficulty of technique, doubt *re* duration of immunity, the possibility of persistence of the virus in nervous tissue, followed by its elimination *via* saliva, and occasionally post-vaccinal paralysis.

The greatest risk of preventive vaccination in a country where rabies exists is that it may be superimposed on an infection already naturally acquired by the dog.

The author quotes a case in which an owner presented a dog for treatment, knowing it to have been bitten by another rabid dog. This fact was mentioned by the owner (who had already had an initial "vaccination" done when abroad, and desired a continuation of the treatment). Treatment was naturally refused. The dog was destroyed twelve days later, showing clinical signs of rabies.

According to the author, the only allowable case for preventive vaccination of dogs in France is when the history of the dog is known, it being a working dog required to move with its master to a district in which rabies is known to exist.

C. V. W.

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[A Case of Tooth Caries with Fistula Formation in a Nutria. Zschokke, W., and Saxer, E. *Schweiz. Archiv. f. Tierhlk.* 1933. Vol. 75, No. 7.]

This is the third of the authors' "Observations on Diseases of Fur Animals," and they describe a case of caries of several cheek teeth of a nutria. The third right lower tooth was in an advanced stage of disease and had been split by impacted food material, with involvement of the alveolus and mandible, which showed much rarefying ostitis and fistula formation, with openings to the outside.

J. E.

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[Pneumothorax and Subcutaneous Emphysema caused by a Foreign Body. Tschumi, H. *Schweiz. Archiv. f. Tierhlk.* 1933. Vol. 75, No. 1.]

This extraordinary case record deals with a cow seen on account of suspected blackquarter with crepitations over the right hip region. On examination, the emphysema was found to be purely subcutaneous and not extending to the muscles. Apart from that and a hollow sound on percussion of the right thoracic region, the animal appeared fairly well. The next day the emphysema had extended down to the hock joint and the cow's general condition was worse. It deteriorated further during the two following days, so that emergency slaughter was advised and performed.

N.V.M.A. Divisional Reports

SOUTH-EASTERN V.M.A.

ANNUAL MEETING AT TUNBRIDGE WELLS

The Annual Meeting of the South-Eastern Division of the N.V.M.A. was held in the Castle Hotel, Tunbridge Wells, on March 16th, 1933. Mr. H. P. Hogben (President), occupied the chair, and the following members were present: Major L. P. Pugh, Major G. W. Dunkin, Messrs. A. Spicer, F. Crowhurst, A. D. McEwen, C. Crowhurst, E. Morgan, J. G. Cattell, W. D. Halfhead, F. B. O. Taylor, C. Roberts, A. B. MacIntyre, H. Taylor, A. Eccles, J. T. Turney, R. V. Isherwood, and T. Dalling (Hon. Secretary). The following visitors were present: Messrs. R. S. Roberts, Ll. E. W. Bevan, P. D. Huston, D. Johnston, J. S. Blair, and Lieut.-Colonel P. J. Simpson (President, N.V.M.A.). Apologies for absence were received from: Major Rose, Professor J. B. Buxton, Sir Frederick Hobday, Professor Wooldridge, and Messrs. L. Hughes, E. Ebbetts, T. F. Hogben, G. Bloxsome, J. B. Dier, and F. Marks. It was decided that letters be sent to Mr. Dier, Major Edgar, and Mr. J. W. Pritchard sympathising with them in their indisposition.

The minutes of the last meeting were taken as read.

On the motion of Mr. Henry Taylor, seconded by the Hon. Secretary, Mr. Donald Johnston (Lewes) was nominated for election to the Division.

Hon. Secretary's Report

The Hon. Secretary then presented his Annual Report, in the following terms:—

"During 1932, only two meetings of the Society were held. The Summer Meeting was cancelled because of the N.V.M.A. Congress as Folkestone, during August.

"The first meeting was held on March 11th, at Tunbridge Wells, Mr. C. Roberts kindly providing accommodation and refreshments. Mr. H. P. Hogben presided, and 16 members and two visitors were present. This was the Annual Meeting, and the usual business was transacted, including the re-election of Mr. Hogben as President for the year. Mr. A. Spicer, of Oxted, opened a discussion on the advisability of Johne's disease being made notifiable. Several members took part in the discussion, and a resolution 'That it is the considered opinion of this meeting that it is not advisable to make Johne's disease notifiable at the present time' was passed.

"The second meeting was held in the Star Hotel, Maidstone, on November 30th, when Mr. Hogben presided. There were present 17 members and one visitor. At this meeting the office-bearers for 1933 were nominated. Several items of correspondence from the N.V.M.A., of a private nature, were discussed, and suitable replies drafted. The Hon. Secretary read his report with regard to the Royal Sanitary Institute Congress, 1932, at which he was a delegate. Two short papers were read, one on 'Sewage Poisoning,' by Mr. Spicer, and one on 'Diseases of the Fox reared in Captivity," by the Hon. Secretary. The Society then entertained the members to tea.

"The year has been marked by the addition of five new members, which brings the total number of members to 53."

Finance.—This was followed by the Financial Statement, which had been examined and passed by the Hon. Auditors. The financial position of the Division was considered to be highly satisfactory.

On the motion of the Hon. Secretary, seconded by Mr. A. Spicer, it was unanimously agreed to send the annual subscription of £3 3s. to the Victoria Veterinary Benevolent Fund, *plus* a special donation of £5 5s.—a total of £8 8s. in all.

The Hon. Secretary reported that an invitation had been received from the Royal Sanitary Institute, to send a delegate to the Annual Congress, to be held at Blackpool. The Hon. Secretary was again asked to represent the Division.

A letter was read from Major C. Rose (Tonbridge), asking that his resignation be accepted as he had now retired from active practice. It was unanimously resolved to appoint Major Rose an Honorary Member of the Division as an appreciation of the keen interest he had taken for many years in the activities of the Division.

Mr. C. Roberts moved that a letter of congratulation be sent to Sir Frederick Hobday (an Honorary Member of the Division), on the occasion of his being knighted. This was seconded by several members, and carried unanimously with acclamation. The Hon. Secretary sent the following letter:—

March 17th, 1933.

"Dear Sir Frederick,

"At our Annual Meeting yesterday, it was unanimously agreed to insert the following in our minutes:—

"Mr. Charles Roberts, Tunbridge Wells, proposed that we record in our minutes our deep

* Received for publication April 28th.

Post-mortem examination showed an old-standing traumatic reticulitis with a large hæmatoma of the diaphragm and perforation into the right pleural cavity, pneumothorax with collapse of the right lung, and the presence of air under the peritoneum of the diaphragm and upper abdominal region.

It was assumed that the air had come from a perforated lung into the pleural cavity and between the layers of the abdominal wall and finally had reached the subcutaneous position on the right quarter.

J. E.

sense of appreciation of the honour that has been conferred by His Majesty the King on one of our honorary members, namely, the conferring of a knighthood on Professor Frederick Hobday. No man more richly deserves the honour, and we as his fellow associates in this Division wish to place on record our heartiest congratulations.

"This was carried with acclamation.

"Yours sincerely,

"T. Dalling, *Hon. Secretary.*"

Election of the Office Bearers

The following officers were elected for the ensuing year: *President,* Mr. A. Spicer; *Vice-Presidents,* Messrs H. P. Hogben, C. Crowhurst, F. Crowhurst, and E. Ebbetts; *Hon. Secretary and Treasurer,* Major T. Dalling; *Council,* Messrs. J. G. Cattell, A. T. Crowther, J. B. Dier, F. C. Gillard, T. F. Hogben, F. Marks, E. Morgan, and C. Roberts; *Hon. Auditors,* Messrs. C. W. Perrin and A. Whicher; *Representatives to Council, N.V.M.A.,* Major G. W. Dunkin, and Major L. P. Pugh; *Representative to Victoria Veterinary Benevolent Fund,* Major L. P. Pugh.

Mr. H. P. Hogben then vacated the chair in favour of the newly-elected President, Mr. A. Spicer, who proposed a vote of thanks to the retiring President for the good work he had done for the Division during the two years he had occupied the Presidential Chair. He recalled that Mr. Hogben had given valuable service to the Division not only as its President, but as the Hon. Secretary for a long term of years. The Hon. Secretary seconded the motion, which was carried unanimously. Mr. Hogben replied suitably, and referred to the help he had received during his term of office from the Hon. Secretary.

Mr. Spicer then read his address on "Observations on the Testing of Cattle for Tuberculosis by the Double Intradermal Method." The address was in place of the usual Presidential Address, and was discussed by several members and visitors.

[Mr. Spicer's paper and a report of the discussion which followed its presentation, are reproduced earlier in this issue.—Ed., *V.R.*]

Mr. H. P. Hogben brought forward the subject of Veterinary Advisory Officers, and proposed a resolution on the matter. After some discussion it was resolved to defer further consideration to a future meeting.

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The meeting was followed by an informal dinner, at which over 20 members and friends, including ladies, were present. Mr. Spicer presided, and in a short speech of welcome, referred to the pleasure it gave him and all present to have Colonel Simpson, the President of the N.V.M.A., at the dinner. Colonel Simpson replied in a few well-chosen words, and appealed for help from the Division on behalf of the Ladies' Guild for the Victoria Veterinary Benevolent Fund.

T. Dalling, *Hon. Secretary.*

WEST OF SCOTLAND V.M.A.*

PRESIDENT'S ADDRESS AT GLASGOW

A meeting of the Division was held in the Glasgow Veterinary College, on Wednesday, April 12th, 1933.

The President, Mr. J. F. Taylor, occupied the chair, and the following members signed the attendance book: Professor G. W. Weir, Messrs. H. H. Brodie, Hugh Begg, Junr.; David Brown, William Watt, P. Meikle, A. Sillars, R. Renfrew, Esmond Brown, D. Campbell, H. M. Roemmele. Visitors included Mr. N. Dobson, Mr. S. Jamieson, and the following students: Messrs. R. Mitchell, Junr., Edward McNab, and J. Steven.

Apologies for absence were received from Professor William Robb, Mr. Robert Mitchell, and Major J. G. McGregor.

The minutes of the last meeting, as printed in the *Veterinary Record* of March 11th, were taken as read and adopted.

Arising out of the correspondence, it was agreed that the Hon. Secretary act as Editorial Representative for the Division, and members are asked to send items of interest to him, for insertion in the *Record.*

None of the members present being golfers, it was agreed that the letter from the Victoria Veterinary Benevolent Fund with regard to the Golf Tournament in connection with the Congress, be allowed to lie in the table.

One or two items arising out of the correspondence were remitted to the Executive Committee for their consideration, their findings to be communicated to the Division for consideration at an early date.

Report.—A very full report was given by Professor Weir (past Chairman of the Scottish Branch, and the Division's present Representative) on the work done by this live arm of the N.V.M.A. Professor Weir was accorded a hearty vote of thanks for his interesting summary and efforts on behalf of the Division.

Nomination.—Mr. S. Jamieson, proposed by Professor Weir, and seconded by Hon. Secretary, was nominated for membership.

Presidential Address

The President, Mr. J. F. Taylor, then gave the following Address from the Chair:—

My first duty is to express to Professor Robb our appreciation of the services he has rendered to the Division as President during the past year. I am fortunate in succeeding such a member; during the year I have closely followed and admired the way he has conducted our meetings; he has set that just standard which it will be my endeavour to follow. When he has retired from the Chair, I am looking forward to his kindly help to enable me to uphold the traditions

* Received for publication April 18th.

of my new office. I would ask you to accord him a very hearty vote of thanks.

Let me now thank you for the great honour you have conferred on me in electing me as your President. I can only surmise that my regular attendance at meetings, together with a great interest in all that pertains to the welfare of the profession, is my main claim to the office.

Often, as I look round our table, I observe the same familiar faces, and, nearby, the empty chairs for those who, I am sure, could sometimes be with us, if they would. I know the difficulties of those engaged in practice, and the strong temptation to stay at home, but a few hours passed with our fellow practitioners are well spent. Friendships made at our meetings clear away most of our difficulties outside.

I have had the honour of serving on the Executive Committee of the Scottish Branch, and would say that I think few realise what an important part the Branch plays in the welfare of the profession in Scotland. It brings all shades of opinion together from all quarters.

The Scottish Branch took up the West of Scotland Division's idea of a Tuberculosis Eradication Scheme and that it should be kept continually before the Government. The financial condition of the country became worse, however, and a minor scheme, known as the Accredited Herd Scheme, was put forward as less expensive, until such time as financial conditions improved. Practitioners will be pleased to know that the latter scheme gives them their just share of the work. The eradication of tuberculosis from our herds is a very urgent matter, and every encouragement should be given to all to participate in that problem. I believe this could be done very effectively by the practitioner with the permanent official as the guiding hand. Such an official should not carry out the tuberculin test except in the nature of a check test as required. Nothing is more inclined to discourage the practitioner than to clear up herds [even although the owner does not desire to hold a Licence under the Milk (Special Designations) Order] and then find them taken over by a Local Authority, and the test carried out by their whole-time official at a nominal fee. In one case known to me, the charge is one guinea per herd, no matter what may be the size of the herd or its distance away.

The intradermal tuberculin test is causing no little concern to the profession; I suggest that a subcutaneous test be carried out occasionally in all herds, especially where sudden disaster has overtaken what has been for long considered a free herd.

I feel that the time has come for the Government to transfer the money being spent on the Tuberculosis Order to a more useful purpose. They could deal with the tuberculous udder as at present and thereafter make a start with the Accredited Herd Scheme. We would then get herds cleaned up for all time. A certain area in North Ayrshire has been cleaned up as an experiment by a Research Institute, and it would be easy to take over this area and extend it. I see no object in wasting money in taking cows, under the Tuberculosis Order, which are obviously about to be slaughtered by the owner for ordinary economic reasons. They have done all the damage they can do.

I am interested in Calmette and Guèrin's theory of vaccination. It is much better to have an immune herd than a tuberculin tested one with its special liability to re-infection. Further research along these lines is necessary.

Great improvement has taken place in our dairy byres since the Milk and Dairies Act came into force. The introduction of the water bowl has improved the general health of our stock, so much so, that stomach troubles during the winter months are almost unknown in our best-conducted herds. This used to be a very lucrative source of income to the country practitioner. Ventilation and light have also conduced to the general health of the cow.

One part of the byre, *viz.*, the manure channel, is very antiquated. It amazes me to see a first-class byre, holding probably 50-60 cows, with the liquids running the whole length of the byre. What a source for spreading diseases such as mastitis and abortion! I suggest that between every two cows the liquids should be led into a glazed pipe in the walk itself, such pipe to be flushed out daily. I know the sanitary authorities do not look with favour on inside drains, but properly constructed, ventilated, and flushed their use would be preferable to the present method of having contaminated discharges flowing past the cows to be lifted and spread by the tails.

I am sorry that little provision is made for the sick cows or for the newly-born calf. A comfortable and isolated place, handy to the byre, should be provided for the sick and calving cows.

The accommodation for calves is bad, and should white scour enter the herd, there is little hope of rearing young stock. No byre should be considered fit for dairy purposes unless this accommodation is provided. The only way to get it is by the employment of compulsory measures.

I have wandered on to the thoughts of one engaged in the routine of country practice, probably away from the usual procedure of a Presidential Address, but that is excusable in one brought up in that school.

Our profession has never stood still. Our forbears were hard-working and hard-thinking men. What would our student of to-day think of setting out on foot with a plaid and stick to visit the sick animal, or, coming nearer my day, going in an open gig in all kinds of stormy weather? These were the men who cleared rinderpest,

XIII

glanders and pleuro-pneumonia from the country and laid the foundation of the profession which we follow to-day. They have left us honourable traditions; let us follow them.

Research has been a great aid to the advancement of the profession. I remember, as a student, being sent off with a roll of white tape to put a seton in the dewlap of young calves as a preventive of blackleg. Now the laboratory provides a vaccine.

To the keen veterinary student our profession provides what, to me, is the most interesting occupation. Some may desire to follow the path of official life; there is great scope there for the young veterinarian of to-day. Others may prefer the life of general practice where you set out in the morning and every day find something of engrossing interest.

Many prophets have said that our profession is finished, in this age of motor transport. I do not think so. With hearty co-operation between the official members of the profession and the practitioner, we are starting out on a new era of usefulness. Let our Divisions shape that policy and our profession will increase in importance.

Paper.—Mr. N. Dobson, B.Sc., M.R.C.V.S., Research Officer, Ministry of Agriculture Laboratories, delivered a very interesting paper on Poultry Diseases, illustrated by lantern slides. He also demonstrated the methods of taking blood samples, inoculating against fowl-pox, and the technique and reading of the tuberculin test.

During the interval between the paper and demonstration the members partook of tea.

The meeting terminated by the according of hearty votes of thanks to Mr. Dobson for so kindly coming to give such an instructive lecture on a subject on which our attention is gradually being focussed as an interesting and lucrative sideline in general practice, and to Mr. Taylor for his conduct in the chair.

Alex. Thomson, *Hon. Secretary.*

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SOUTHERN COUNTIES VETERINARY SOCIETY*

ANNUAL MEETING AT SOUTHAMPTON

The Annual General Meeting of the Southern Counties Veterinary Society was held at the residence of the Hon. Secretary, Mr. G. N. Gould, Junr., at 10, Landguard Road, Southampton, on Friday, March 3rd. In the unavoidable absence through illness of the President (Major E. S. Martin), who sent a letter regretting inability to attend, and expressing the hope that the meeting would be a great success, Mr. J. F. D. Tutt (Vice-President), occupied the chair.

* Received for publication April 11th.

Correspondence was read relative to the annual subscription to the National Horse Association which it was decided to renew; also to a golf tournament organised for competition for the National Veterinary Benevolent Fund Golf Trophy. This was left in the hands of Mr. J. F. D. Tutt, for his attention.

Apologies were received from Sir Frederick Hobday, Dr. Sheather, Mr. C. Roberts, Lieut.-Colonel P. J. Simpson, Messrs. W. Burt, G. Parr, E. R. Harding, and Henry Gray.

Major Facer proposed, and Captain Bullen seconded that a donation of £5 5s. be sent to the National Veterinary Benevolent Fund. This was carried.

It was agreed that a letter of sympathy be sent to Major Martin expressing the hope of the members that he would soon be restored to good health.

Reports

By the Hon. Secretary.—"The meetings held have been four in number. The first was held at Christchurch, and papers were read by J. F. D. Tutt, J. B. White, and Major Martin. Eleven members and one visitor were present. The second took place at Southampton and attracted nine members; this mainly was a business meeting. The third, at Winchester, attracted five members and one visitor. At this meeting a paper was read by me. The fourth is to-day's meeting. The meetings arranged at the Royal Show were—like the Show itself—a failure from the point of view of attendance. Excerpts of the papers have since been published in various agricultural journals.

"There has been a continuance of efforts to inaugurate schemes for the free veterinary treatment of sick animals of the poor, but the measure of support accorded by the members has been disappointing."

By the Hon. Treasurer.—"The membership is now 40—33 paying and seven honorary members—an increase of four members in twelve months. To date only 19 members have paid their subscriptions, and there are six members owing for two or more years, leaving a sum of £13 2s. 6d. outstanding.

"The year's working has been expensive, in view of the Royal Show meetings, but by effecting economies in holding meetings at members' residences and dispensing with a reporter's services, we were able to show a balance slightly in excess of last year, which I consider satisfactory."

Major Woods congratulated Mr. Gould on his reports and proposed that they be received and adopted. Mr. Caudwell seconded, and this was carried.

The Hon. Secretary and Treasurer then announced his resignation from office, which Mr. Tutt moved be accepted with regret. Mr. White seconded and this was agreed.

Election of Officers

The election of officers now took place and results were as follow:—

President.—J. F. D. Tutt, F.R.C.V.S.

Vice-Presidents.—E. R. Harding and Major J. S. Wood.

Hon. Secretary.—J. B. White.

Hon. Treasurer.—H. C. Rockett.

Additional Members of the Council.—Captain Bullen, J. T. Turney, and G. N. Gould.

Paper.—Mr. C. Formston was then called upon to read his paper "Some Surgical Conditions of the Dog's Eye met with in General Practice." [Mr. Formston's paper is published, together with a report of the discussion which ensued, earlier in in this issue.—Ed., *V.R.*]

Then followed a surgical demonstration, by Mr. Formston, on a series of cases to illustrate features of the paper.

A vote of thanks was passed on the proposition of the President, seconded by Mr. Maynard.

Tea was subsequently taken by invitation of Mr. and Mrs. Gould, and this concluded the meeting.

George N. Gould, *Retiring Hon. Secretary.*

Notes and News

The Editor will be glad to receive items of professional interest for inclusion in these columns.

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DIARY OF EVENTS

May 24th.—R.C.V.S. Voting Papers and Annual Reports issued.

May 24th.—Annual General Meeting of the Comparative Section of the Royal Society of Medicine.

May 26th.—Meeting of the Southern Counties Division, N.V.M.A., at Winchester.

May 29th.—Meeting of the Editorial Committee, N.V.M.A., at 2, Verulam Buildings, Gray's Inn, W.C.1, at 4.30 p.m.

May 31st.—R.C.V.S. Council Election: last date for receipt of Voting Papers.

June 1st.—Meeting of the Central Veterinary Society at 10, Red Lion Square, W.C.1.

June 7th.—R.C.V.S. Annual General Meeting, 12 noon.

June 7th.—Annual General Meeting of Victoria Veterinary Benevolent Fund.

June 8th.—D.V.S.M. Examination begins.

June 8th.—Meeting of the Lincolnshire and District Division, N.V.M.A., at Peterborough.

June 8th.—Combined Meeting of the Royal Counties, South-Eastern and Central Divisions, N.V.M.A., at the Royal Veterinary College, Camden Town.

June 9th.—R.A.V.C. Annual Dinner, Hotel Victoria.

June 12th.—D.V.S.M. Oral Examination.

June 30th.—Final date for payment of Annual Fees to R.C.V.S.

July 5th.—R.C.V.S. Committee Meetings begin.

July 6th.—Meeting of Council R.C.V.S. for election of President and other Officers.

July 7th.—R.C.V.S. Quarterly Meeting of Council.

July 10th.—R.C.V.S. Membership Examination begins.

Sept. 18th-23rd.—N.V.M.A. Congress, Llandudno.

Sept. 25th-26th.—R.C.V.S. Jubilee Memorial and Bursary Prize Examination.

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PERSONAL

Birth.—Catmur.—On April 28th, 1933, at The Vineyard, Abingdon to Davida (*née* McLennan), wife of Barry Gunn Catmur—a daughter.

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Will.—Wadsworth, Mr. Charles, of Oldham, veterinary surgeon (net personalty £6,347), £6,454.

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ARMY VETERINARY SERVICE

London Gazette—War Office—Regular Army Reserve of Officers

May 9th.—Major P. V. Beatty, having attained the age limit of liability to recall, ceases to belong to the Res. of Off. (May 2nd).

Regular Army

May 12th.—Captain M. Farrelly, h.p. list, late R.A.V.C., on completion of a period of five years on the h.p. list, is placed on ret. pay on account of ill-health (May 12th).

Territorial Army

May 16th.—Captain W. L. Stewart resigns his commission on reduction of establishment (April 1st).

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THE LATE JOSEPH DIXON, M.R.C.V.S., BLAYDON

In reference to the late Mr. Dixon, whose death was recorded in our last issue, a friend writes: "Ever an unassuming man and a careful and painstaking practitioner, the late Joseph Dixon had carried on practice for some 32 years, and will be a great loss to the many farmers in his neighbourhood. Some of the local collieries will miss him also, for his advice in the matter of pit ponies was well worth the seeking.

"Mr. Dixon—or Joe, as he was affectionately called by many—had suffered for some years from diabetes, but still carried on cheerfully in spite of this disability. Some 14 weeks ago a horse trod on his foot, and every endeavour was made by his medical adviser to save the foot, during which time Mr. Dixon took to crutches rather than lay up and disappoint his clients. Eight weeks ago he had perforce to take to his

bed, and it was eventually decided that the leg must be amputated as gangrene had set in. To illustrate his loyalty to his locality, he refused to go into any other hospital than the Newburn Cottage Hospital, where the operation was performed on Sunday, May 7th. He apparently bore it well, and was quite cheery and bright on the following morning, and was chatting with the Matron of the Hospital just a few minutes before he quite suddenly passed away.

"The funeral was very largely attended, and some of his brother veterinarians were amongst the mourners, Mr. H. S. Elphick, as President of the North of England Veterinary Medical Association, represented that body, and there were also present Messrs. F. Christopher, T. Harper, and T. R. Jarvie. Mr. Dixon was a great lover of his home, and took most of his pleasures by his own fireside, and great sympathy will be felt for his widow and three daughters in the loss of a loyal husband and loving father."

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STATE VETERINARY SERVICE QUESTION

At a recent meeting of the Birmingham and Midland Chamber of Agriculture, the question of the desirability of a State veterinary service was brought forward by the Chairman, Mr. Laurence C. Tipper, M.R.C.V.S., who pointed out that one recommendation of the Milk Reorganisation Committee was that whole-time veterinary service was essential. It added: "The appointment of a whole-time chief veterinary inspector by the Council of each county and county borough is the irreducible minimum."

In some quarters, said Mr. Tipper, it was held that the whole work of animal disease and tuberculosis inspection should be under one central head as a State veterinary service. At present a large part of this work was done—and very well done in most cases—by part-time veterinary practitioners living in the district, who were in frequent touch with the farmers, and performed their duties with a minimum of expense to the ratepayers. Private practitioners in England and Wales alone numbered 1,000 and in many instances they had difficulty in keeping up a satisfactory position owing to the depression in agriculture. He thought any increase of appointments should be in the direction of increasing the number of part-time officers. At present there were 96 permanent veterinary officials in England and Wales under the Ministry of Agriculture (apart from the Weybridge Government Laboratory), and those in county and municipal areas brought the total up to 173.

The meeting passed a resolution stating that, whilst the Chamber recorded their appreciation of the valuable work performed by the veterinary department of the Ministry of Agriculture, they viewed with concern suggestions for considerably increasing the veterinary officials of, or under, the control of the Ministry, leading to a State veterinary service.

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SWINE FEVER ORDER

Owing to the prevalence of swine fever in Shropshire, Denbighshire, Flintshire and parts of Cheshire, the Ministry of Agriculture has declared those counties infected areas and no pigs in any public auction there will be allowed to be moved without a licence and except for immediate slaughter.

Correspondence

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

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VETERINARY EXAMINATION OF DAIRY COWS

To the Editor of the Veterinary Record.

Sir,—The letter from Mr. Hall Masheter published in your issue of the 6th inst., in which he alludes to my article in *The Veterinary Journal*, induces me to add a few comments on this rather controversial subject.

I regret that Mr. Hall Masheter has so hastily come to the conclusion that my article related only to whole-time inspections. It did not, and I think it will be seen that I made no allusions to whole- or part-time services, other than where I quoted details of what was done in my own department, which certainly is chiefly worked by a whole-time staff. Moreover, I took particular care not to differentiate between whole- or part-time inspections of cows when I took part in the discussion on Mr. Baxter's recent paper at the Farmers' Club.

It has certainly been a matter of considerable surprise to me that, after our profession has for many years been advocating the veterinary examination of dairy herds, now, when we find that our much-cherished hope is likely to become a reality rather than an ideal, there appears to be such a state of panic amongst many members of our profession, that it threatens completely to divide our ranks. What can be more detrimental to our own interests than such a cleavage? Is this a demonstration of *Vis unita fortior*?

To my mind, a great deal of irrelevant matter is being talked about whole- and part-time services, and there appears to be a considerable amount of unnecessary apprehension of the position. The real question is what the public who require a clean milk supply and are apparently going to be willing to pay for it, desire. It is not the question of the whole-time men being better than practitioners, nor *vice versa*—there are good, bad and indifferent in each class—but of which system is superior, judged on its own merits of practicability, economy and efficiency. If the practitioners can put up a better case than the few now holding whole-time posts, I take it that they will be employed. However much one would sympathise with any individual member who may lose from any change of system, it is of no use approaching the public with the plea of a reduced income, for the matter cannot be settled on this score. From the practitioners' standpoint, I think that Mr. Hall Masheter has greatly weakened his case by the concluding paragraph of his letter referred to. Further comment on this is superfluous!

It must be remembered that there has been no inspection of cows in the majority of districts in England, so that if this is instituted it will be largely new work, and in those districts where practitioners at present carry out the duties, it surely might be arranged that they should carry on under the terms suggested by the Milk Reorganisation Commission. On the other hand, it is not easy to see how a busy practitioner can find time to carry out a work in addition to his private practice, which it takes a whole-time official all his available time and energy to perform, and the microscopic examination of the inevitable samples of milk and other discharges

is a never-ending tax on one's time. I do not think that it can generally be conceded that every country practitioner could be appointed for part-time duties, and this being so, what would the attitude of those who do not hold such appointments be? Mr. Steele Bodger rightly called attention to this aspect at the April meeting of the Council of the N.V.M.A.

In certain small areas part-time officers have done, and are doing, excellent work, but in large county districts it is difficult to understand how the work can be as expeditiously and efficiently carried out unless all the energies of those undertaking it can be given.

It must be agreed that the chief object for which routine inspection of cows was suggested is to eliminate those giving tuberculous milk, and the effect of this can be judged by the number of such animals detected and dealt with under the Tuberculosis Order. The following figures quoted by the Standing Committee of the Council of Agriculture for England in its report on the subject of the Purity of the Milk Supply are interesting and instructive, and speak for themselves. They state that in a large county where inspections are carried out by whole-time officers 0·4 per cent. of the cows were found to have tuberculosis of the udder, or to be giving tuberculous milk; in 33 counties where no inspections are carried out at all, and the farmers are left to report, plus occasional bulk-sampling, 0·11 per cent. of the cows were reported as so affected, but in eight counties in which there was routine inspection by part-time veterinary surgeons, the percentage was only 0·06.

Yours faithfully,

D. S. Rabagliati.

County Hall,

Wakefield.

May 13th, 1933.

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JERSEY HEIFER'S WORLD'S RECORD

To the Editor of the Veterinary Record.

Sir,—A few months ago I read a paper on the "Provision of Minerals for Milch Cows by Feeding and Fertilising," which dealt, to a large extent, with the management of the Bollhayes Herd of Jersey cows.

The paper mentioned the marked increase in milk records over a number of years consequent upon that management, and after its publication I received a number of letters from veterinary surgeons asking for further details.

I thought it would be of interest to record that this herd has just attained the world's record with the first-calf Jersey heifer "Bollhayes Merry Bart" which calved on March 24th, at the age of two years five months.

Her milk record is as follows:—

1st	week	recorded	212¼	lbs in 5	days.
2nd	"	"	341	lbs " 7	"
3rd	"	"	408⅜	lbs " 7	"
4th	"	"	411	lbs " 7	"
5th	"	"	416½	lbs " 7	"
6th	"	"	446¾	lbs " 7	"

She has just attained a top yield in 24 hours of 73 lbs.—7 3/10 gallons.

She is strictly rationed and milked three times daily, and is in perfect health and condition.

She was bred by Mr. McWilliam, the owner.

I might add that I can arrange for veterinary surgeons interested to inspect the farm and herd to demonstrate the condition of the pastures and the cattle kept on this system.

Yours faithfully,

George N. Gould, Junr.

"Rockholme,"

10, Landguard Road, Southampton.

May 14th, 1933.

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OVARIAN CYSTS IN MARES

To the Editor of the Veterinary Record.

Sir,—In replying to the discussion on his paper on "The Examination of Polo Ponies," read before the Central Veterinary Society, on April 5th, 1933, and which is reported in your issue of May 13th, Major R. H. Stalker, M.R.C.V.S., is said to have stated: "He did examine the ovaries per rectum; the point was, that one could *not* feel the cysts in the ovaries *unless the mare was in season.*"

This seems to me to be a very remarkable statement, and quite contrary to practical experience in this country. I should like an explanation why the cysts cannot be felt unless the mare is in season, and further, if the ovaries are examined during œstrus, how they are differentiated from ovisacs. It is quite certain that not a few reputed cysts are ovisacs, and I cannot believe that if cysts are present, they can only be detected during œstrus.

Yours faithfully,

J. F. D. Tutt, F.R.C.V.S.

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COLIC IN SOUTH AFRICA

To the Editor of the Veterinary Record.

Sir,—Mr. E. L. Taylor, in his interesting and useful address on the Control of Red Worms in Horses, printed in your issue of May 6th, says that, although verminous aneurysms caused by *S. vulgaris* are very common in South Africa, colic is rare.

This may be true of South African-bred horses and mules on a certain dietary—such as oaten hay with a small mealie ration—but I can state definitely that colic was not rare among the 1,500-2,000 horses and mules of the British Army at Bloemfontein from 1910-1913.

The forage was chiefly lucerne "hay" and mealies, and the rations were generous. Any dietetic excess or indiscretion produced colic as readily among those animals as among the animals of a similar type elsewhere. A proportion of the horses and mules had originally come from North America, Australia, and England, but there were many country-breds. Sand colic among the mules was at times a daily occurrence and flatulent colic not due to sand was common.

On one never-to-be-forgotten summer's day I attended eight cases of colic among horses, apparently due to an excess of sun-dried green lucerne. No other cause could be discovered.

A frequent cause of colic was the breaking loose of cavalry horses during the night, and their raid on unprotected sacks of mealies. The attacks usually occurred when the troop concerned was watered on return from early morning exercise, about 8 p.m.

A polo pony in my care developed colic nearly every time it received a bran mash, until at last we detected this idiosyncrasy, and ceased to give it bran mashes.

If, in addition to this quite sufficient incidence of colic from sand and dietetic causes, there had been a considerable incidence from verminous aneurysms, we should have had a busy time filling up Veterinary History Sheets as well as "treating" colic.

Mr. Taylor's statement would seem, therefore, in part to need some qualification; although, on the whole, the clinical experience at Bloemfontein strengthens his argument by accounting for the causes of the colic which in most, if not all, instances, were unmistakably those that I have mentioned.

The lucerne hay then supplied by the contractors at Bloemfontein was not all "hay" in the English sense of the word. Some of it was apparently unfermented sun-dried and baled green lucerne, and any excess of this, in conjunction with a generous mealie ration, seemed at times to have a pathogenic effect on the heavier types of horses and on the mules.

Yours faithfully,
J. Wakefield Rainey.

Burlington,
Newbury, Berks.
May 10th, 1933.

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"DRY MOUTH" AND "NON SWEATER"

To the Editor of the Veterinary Record.

Sir,—On the recommendation of my old friend, Dr. George Collins, who as Medical Officer to the National Sporting Club for many years, had an almost unique experience in mental reflexes, I have treated both the above conditions in 'chasers and polo ponies by the administration of half-a-pound of glucose dissolved in hot water and given in the last meal before playing or racing. I have never yet found it fail, and have tested its efficacy by omitting it in animals which have responded to the treatment.

Should any of your readers think of trying it personally before competing in a boxing contest they should take the glucose *after* weighing in as the increase in weight following its use in the case of a fine-drawn athlete is astonishing in its rapidity.

Faithfully yours,
David Eric Wilkinson.

Oakwood,
Chigwell, Essex.
May 13th, 1933.

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A DISCLAIMER

To the Editor of the Veterinary Record.

Sir,—In the report of the proceedings of the Central Veterinary Society, in the issue of the *Veterinary Record*, No. 19, Vol. XIII, page 460, a member was reported as having associated my name with the deliberations of the Reorganisation Commission for Milk. I merely wish to state that I was not consulted in any capacity by that body.

I am, Sir,
Yours obediently,
J. B. Buxton.

Institute of Animal Pathology,
Field Laboratories,
Milton Road, Cambridge.
May 13th, 1933.

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(1) REPORT OF RE-ORGANISATION COMMISSION FOR MILK; (2) R.C.V.S. COUNCIL ELECTION

To the Editor of the Veterinary Record.

Sir,—May I use your columns to congratulate Professor T. Hare upon his most timely and opportune reference to the Report of the Milk Re-organisation Commission and his forceful exposition of the great menace it implies to the whole profession?

Professor Hare has, of course, merely touched upon the fringe of the subject, and I trust that, at an early date, we shall have a much fuller review of the subject contributed by him.

I am not aware that there is anything mercenary, or derogatory, in the part-time inspector voicing his claims to consideration, or objecting to being swept from an office he is well-qualified to hold, but the disinterested support of Professor Hare and Professor Wooldridge is especially welcome, and it is most refreshing to read their protest against the suggested establishment of an autocratic veterinary oligarchy.

There appears to be little probability of the Report receiving legal sanction, but, nevertheless, the observations on the cost and efficiency of local veterinary administration must not be allowed to pass unchallenged, and I hope that the N.V.M.A. will be able to supply the information for which Professor Hare asks.

Although the menace is primarily directed against the part-time inspector, unless it be vigorously opposed and destroyed now, the days of the general practitioner will be numbered, except as a hewer of wood and drawer of water, should the suggestions of the commission ever be adopted.

As one seeking election to the Council of the Royal College of Veterinary Surgeons, to increase the representation of the interest of the general practitioner there, I would borrow the remarks of Professor Hare from your issue of the 13th inst., and use them as the basis of my election address.

Yours faithfully,
A. B. Mattinson.

Friars House,
Bamber Bridge,
Preston, Lancs.

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R.C.V.S. COUNCIL ELECTION

To the Editor of the Veterinary Record.

Sir,—I have been nominated for election to the Council of the Royal College of Veterinary Surgeons, by Major Kirk and Professor McCunn, but unfortunately my nomination was not in time to catch the foreign vote. I would be grateful if readers would register their votes in my favour.

I am one of the general practitioners, and my interests, and sympathies, are with them, as their position is rapidly becoming almost tragic. I am firmly convinced that the Veterinary Advisory Scheme is totally unnecessary and should be abolished. Veterinary surgeons holding part-time appointments have done good work in the Public Health Service and should be retained wherever possible.

I have served on the Council, Committees and Sub-Committees of the National Veterinary Medical Association for some years, and if elected will do my utmost to safeguard the interests of the general practitioner, who, I still maintain, is the backbone of the profession, and who I am sure requires a greater and stronger representation on the Council of the Royal College of Veterinary Surgeons.

Yours faithfully,
W. K. Townson.

Red Walls,
77, Lincoln Road, Peterborough.
May 14th, 1933.

The Editor acknowledges, with thanks, the receipt of the following:—

Communications from Mr. D. J. Anthony (Brierley Hill), Dr. G. W. Clough (London), Dr. H. H. Curson (Pretoria, South Africa), Messrs. A. B. Kerr (Chester) and J. F. Macdonald (Putney), Dr. R. N. Shaw (Northboro', Mass., U.S.A.), Messrs. H. P. Standley, Junr. (Norwich) and D. E. Wilkinson (Chigwell).

N.V.M.A. Congress at Llandudno, September 18th-23rd, 1933

PROVISIONAL PROGRAMME

The following is the Provisional Programme of the Association's Congress, to be held at Llandudno from September 18th to September 23rd:—

MONDAY, 18TH, *9.30 a.m.*—Opening of Exhibition of Surgical Instruments, Drugs, etc., by the President. (Town Hall.)
MONDAY, 18TH, *10 a.m.*—Opening of the Congress by the Chairman of the Urban District Council of Llandudno. (Town Hall.)
MONDAY, 18TH, *11 a.m.*—Combined Meeting of Public Health, Experimental Pathology, and Veterinary Medicine and Surgery Sections, to discuss further the subject of "Vaccination against Bovine Contagious Abortion and the relation of this Disease to Undulant Fever in Man."
MONDAY, 18TH, *9 p.m.*—Reception by President.
TUESDAY, 19TH, *9.45 a.m.*—Paper: "The Significance of (*a*) Acid-fast Bacilli, (*b*) *Bacillus coli*, in Milk."
TUESDAY, 19TH, *11.30 a.m.*—Paper: "Johne's Disease, including Johne's Disease in Sheep."
WEDNESDAY, 20TH, *9.45 a.m.*—Paper: "Meat Preservation."
WEDNESDAY, 20TH, *11.30 a.m.*—Paper: "Helminths of Economic Importance in Farm Animals, excluding Poultry."
—Excursion for Ladies.
WEDNESDAY, 20TH, *2.30 p.m.*—Council Meeting, Town Hall.
WEDNESDAY, 20TH, *3.30 p.m.*—Annual General Meeting, Town Hall.
WEDNESDAY, 20TH, *7.30 p.m.*—Annual Banquet.
THURSDAY, 21ST, *9.45 a.m.*—Paper: "Diseases and Accidents referable to the Hunting Field and to the Turf."
THURSDAY, 21ST, *11.30 a.m.*—Paper: "Some Fractures and Dislocations in Small Animals."
THURSDAY, 21ST, *2.30 p.m.*—Demonstration on Meat Inspection of Animals, *ante-* and *post-mortem*—Harold Burrow, M.R.C.V.S., D.V.S.M. (Public Abattoir, Llandudno.)
THURSDAY 21ST, *Evening.*—Dance in aid of Veterinary Benevolent Funds.
FRIDAY, 22ND, *9.45 a.m.*—Paper: "The Relationship of Poultry Diseases to the Practitioner."
FRIDAY, 22ND, *11.30 a.m.*—Paper: "Swine Fever and Enteritis in Young Pigs."
SATURDAY, 23RD, *9.45 a.m.*—Council Meeting.
SATURDAY, 23RD, *10.15 a.m.*—Closing Meeting.

SUBJECTS FOR PAPERS

PUBLIC HEALTH SECTION

(*President*: *Lieut.-Colonel J. W. Brittlebank*, C.M.G., M.R.C.V.S., D.V.S.M. (VICT.).
(*Vice-President*: *Major D. S. Rabagliati*, O.B.E., B.SC., F.R.C.V.S., D.V.S.M.)
(*Recording Secretary*: *P. F. Dolan, Esq.*, M.R.C.V.S., D.V.S.M.)

1.—"The Significance of (*a*) Acid-fast Bacilli, (*b*) *Bacillus coli*, in Milk."
By G. O. Davies, M.V.SC., M.R.C.V.S., D.V.H., Liverpool.
Opener: Captain H. L. Torrance, M.R.C.V.S., D.V.S.M., Nottingham.
2.—"Meat Preservation."
By Dr. W. R. Wooldridge, M.SC., M.R.C.V.S., London.
Opener: T. Moran, D.SC., PH.D., Low Temperature Research Station, Cambridge,

VETERINARY MEDICINE AND SURGERY SECTION

(*President*: *Captain R. L. Lewis*, M.R.C.V.S., D.V.H.)
(*Vice-President*: *Captain J. Cane*, M.R.C.V.S.)
(*Recording Secretary*: *Captain O. V. Gunning*, D.V.M., M.R.C.V.S.)

1.—"Helminths of Economic Importance in Farm Animals, excluding Poultry."
By Captain A. W. Noel Pillers, F.R.C.V.S., D.V.S.M., Liverpool.
Opener: Captain N. Bisset, M.R.C.V.S., Cardiff.
2.—"Diseases and Accidents referable to the Hunting Field and to the Turf."
By Major A. A. Comerford, M.R.C.V.S., Potton.
Opener: Captain E. Brayley Reynolds, O.B.E., M.R.C.V.S., Newmarket.
3.—"Some Fractures and Dislocations in Small Animals."
By Professor J. McCunn, M.R.C.V.S., M.R.C.S., L.R.C.P., London.
Opener: C. Wentworth Elam, M.R.C.V.S., D.V.H., Liverpool.
4.—"The Relationship of Poultry Diseases to the Practitioner."
By Norman Dobson, B.SC., M.R.C.V.S., Weybridge.
Opener: G. C. Marginson, M.R.C.V.S., D.V.S.M. (VICT.), Whitestake.

XIIM

EXPERIMENTAL PATHOLOGY SECTION

(*President*: *Professor J. F. Craig*, M.A., M.R.C.V.S.)

(*Vice-President*: *Major R. Isherwood*, M.R.C.V.S.)

(*Recording Secretary*: *Dr. A. W. Stableforth*, M.SC., M.R.C.V.S., D.V.S.M.)

1.—"Johne's Disease, including Johne's Disease in Sheep."
By Dr. F. C. Minett, M.B.E., M.R.C.V.S., London.
Openers: Major G. W. Dunkin, M.R.C.V.S., D.V.H., Mill Hill; H. Llewelyn-Jones, M.R.C.V.S., Denbigh.

2.—"Swine Fever and Enteritis in Young Pigs."
By J. O. Powley, M.R.C.V.S., Harrogate.
Opener: F. Beckett, M.R.C.V.S., Blandford.

COMBINED SECTIONS

(*President*: *Professor J. Basil Buxton*, M.A., F.R.C.V.S., D.V.H.)

(*Vice-President*: *William Woods, Esq.*, F.R.C.V.S.)

(*Recording Secretary*: *Harold Burrow, Esq.*, M.R.C.V.S., D.V.S.M.)

"Vaccination against Bovine Contagious Abortion and the relation of this Disease to Undulant Fever in Man."
By Dr. W. H. Andrews, M.R.C.V.S., Weybridge.
Openers: Captain S. J. Motton, F.R.C.V.S., Penzance. (From the Practitioner's point of view.)
Captain J. McAllan, M.A., B.SC., M.R.C.V.S., Belfast, and Sir Weldon Dalrymple-Champneys, Bart., M.D., M.R.C.P., Ministry of Health. (From the Public Health point of view.)
L. E. W. Bevan, M.R.C.V.S., London. (From the Experimental Pathology aspect.)

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Grand Hotel, *Promenade* (licensed), from 21s. per day.
Imperial Hotel, *Promenade*, from 18s. per day.
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(* Subject to a special discount of 10 per cent.)
Marine Hotel, *Promenade* (licensed), from 16s. 6d. per day.
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The Hydro, *Neville Crescent, Promenade* (licensed), from 18s. per day.
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Craigside Hotel, *Little Orme, Promenade* (licensed), from 15s. per day. (Free 'bus service to and from town.)
Clarence Hotel, *Gloddaeth Street* (licensed), from 15s. per day.
North Western Hotel, *Vaughan Street* (licensed), from 16s. 6d. per day.

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The Links, from 12s. 6d. to 15s. 6d. per day.
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Waverley (PH), from £3 3s. per week.
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South Parade—
Clovelly (PH), from 10s. per day.
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Glanymor Terrace—
Brinkburn (PH), from 10s. 6d. per day.
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St. George's Crescent—
Elsinore (PH), from 11s. 6d. per day.
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Regent, 9s. per day.
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Gloddaeth Crescent—
Chatsworth House (B), 9s. to 13s. 6d. per day
Toronto (PH), 10s. 6d. to 12s. 6d. per day.
St. Kilda (B), 12s. per day.
Ingleboro (PH), 10s. 6d. and 11s. 6d. per day.

Deganwy Avenue—
Glencoign, 9s. to 10s. 6d. per day.

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Aberford (B), 10s. 6d. per day.
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Seaforth (PH), from 10s. 6d. per day.
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Penrhyn Crescent—
Four Oaks (Temperance), from 12s. per day.
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Claremont, from 10s. per day.

Craig-y-don Parade—
The Craig-y-don, from 12s. 6d. to 15s. 6d. per day.
Ormescliffe, 13s. 6d. to 17s. 6d.

Trinity Square—
"San Remo," 9s. to 12s. 6d.
"Abbeydale," 9s. to 12s.

Abbey Road—
"Whitefriars," 8s. 6d. to 9s. 6d.

Rhos-on-Sea
(4 miles)

Rhos Abbey Hotel, from 16s. 6d. per day.

Colwyn Bay
(4 miles)

Colwyn Bay Hotel, from 23s. 6d. per day.

Conway
(4 miles)

Castle Hotel, from £5 5s. per week. (*En Pension* terms.)